

MEDICAL WORLD NEWS

JULY 29, 1960

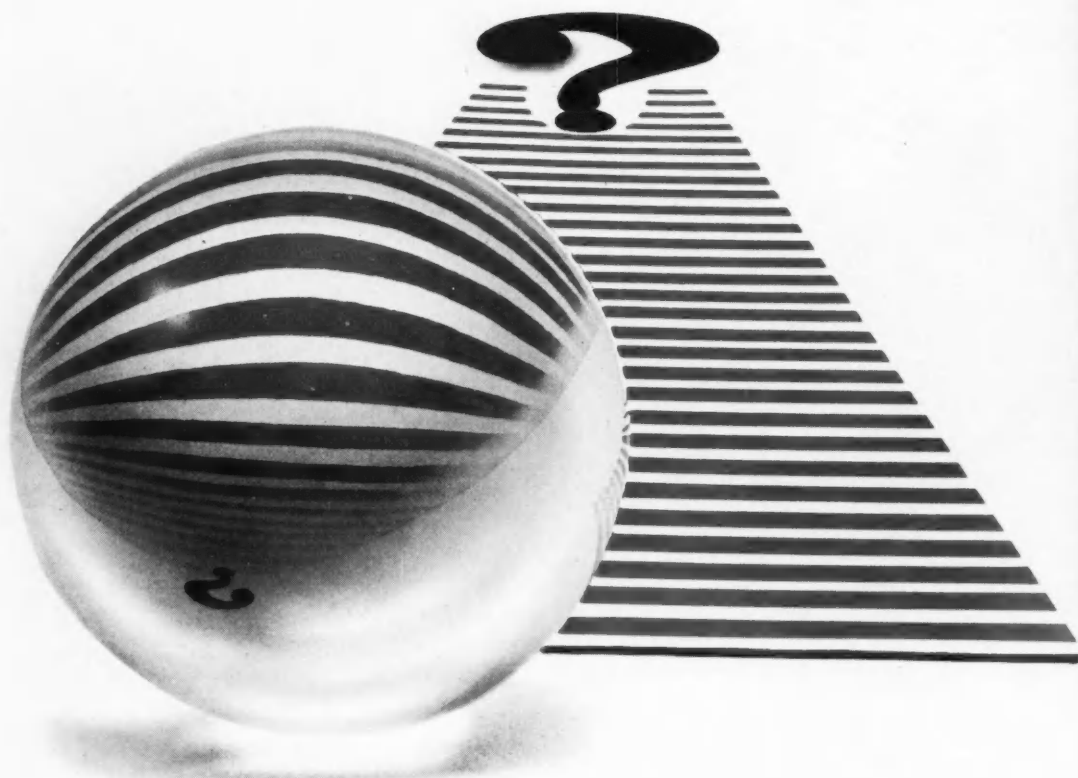


TANK THERAPY

A New Weapon Against Cancer

COMMON ERRORS IN CARDIOLOGY
From Dr. Samuel Levine's Casebook

Jacob D. Farris, M.D.
University of Kentucky
Lexington 1, Ky.



what lurks beyond the broad spectrum?

Broad spectrum antibiotics provide the best means of combating pathogenic organisms which range all the way from large protozoa through gram-negative and gram-positive bacteria to certain viruses at the far end of the spectrum.

But beyond the spectrum lurk pathogenic fungi. It is increasingly apparent that fungal superinfections may occur during or after a course of broad spectrum antibiotics.^{1,2} Long term debilitating diseases, diabetes, pregnancy, corticosteroid therapy, high or prolonged antibiotic dosage, and other causes may predispose to fungal superinfections.^{1,3,4}

Mysteclin-V controls infection and prevents superinfection. It makes a telling assault on bacterial infections and, in addition, prevents monilial overgrowth.^{2,5-8} Mysteclin-V is a combination of tetracycline phosphate complex for reliable control of most infections encountered in daily practice, and Mycostatin, the safe antifungal antibiotic. When you prescribe Mysteclin-V, you provide "broad spectrum therapy" plus extra protection that extends beyond the spectrum of ordinary antibiotics.

*MYSTECLIN®; *SUMYCIN®; *MYCOSTATIN®; AND *FUNGIZONE® ARE SQUIBB TRADEMARKS.

In pediatrics: Mysteclin-F for Aqueous Drops and Mysteclin-F for Syrup are phosphate-potentiated tetracycline combined with the new antifungal antibiotic, Fungizone (amphotericin B). They provide good-tasting, fruit-flavored aqueous liquids for your pediatric patients.

Supplied: Mysteclin-V Capsules (250 mg./250,000 u.); Half-strength Capsules (125 mg./125,000 u.); Mysteclin-F for Syrup (125 mg./25 mg. per 5 cc.); for Aqueous Drops (100 mg./20 mg. per cc.)

References: 1. Dowling, H. F.: Postgrad. Med. 23:594 (June) 1958. 2. Gimble, A. I.; Shea, J. G., and Katz, S.: Antibiotics Annual 1955-1956 New York, Medical Encyclopedia Inc., 1956, p. 676. 3. Long, P. H., in Kneeland, Y., Jr., and Wortis, S. B.: Bull. New York Acad. Med. 33:552 (Aug.) 1957. 4. Rein, C. R.; Lewis, L. A., and Dick, L. A.: Antibiotic Med. & Clin. Ther. 4:771 (Dec.) 1957. 5. Stone, M. L., and Mersheimer, W. L.: Antibiotics Annual 1955-1956, New York, Medical Encyclopedia Inc., 1956, p. 862. 6. Campbell, E. A.; Prigot, A., and Dorsey, G. M.: Antibiotic Med. & Clin. Ther. 4:817 (Dec.) 1957. 7. Chamberlain, C.; Burros, H. M., and Borromeo, V.: Antibiotic Med. & Clin. Ther. 5:521 (Aug.) 1958. 8. From, P., and Alli, J. H.: Antibiotic Med. & Clin. Ther. 5:639 (Nov.) 1958.

Mysteclin - V

Tetracycline Phosphate Complex (Sumycin) and Nystatin (Mycostatin)

SQUIBB



Squibb Quality - the
Priceless Ingredient



"TIME-MATCHED" COMPONENTS

for
smoother
management
of smooth
muscle spasm



BUTIBEL®

TIME-MATCHED



ANTISPASMODIC



SEDATIVE

COMBINATION

BUTIBEL combines two essentially synchronous components—belladonna extract and BUTISOL®. One or two tablets one-half hour before meals and at bedtime assures smooth, uninterrupted control of gastrointestinal spasm through the day and during the night.

Similar preparations containing phenobarbital, which has three times the duration of action of belladonna, must either build up a cumulative sedative burden or leave patients for long hours without effective antispasmodic protection.

By contrast, BUTIBEL, with its time-matched components, gives full, continuous antispasmodic and sedative action for smooth control of functional gastrointestinal disorders.

BUTIBEL: *belladonna extract...15 mg. and BUTISOL Sodium®...15 mg.*
butabarbital sodium

BUTIBEL Tablets • Elixir • Prestabs® Butibel R-A (Repeat Action Tablets)

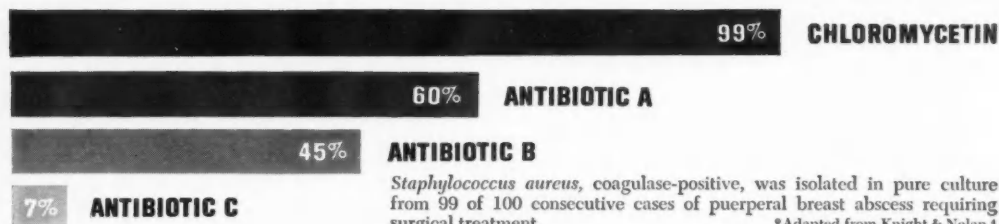
McNEIL

McNEIL LABORATORIES, INC., PHILADELPHIA 32, PA.

repeatedly,
clinicians report...
effective results
against
staphylococci¹⁻⁴

CHLOROMYCETIN®

IN VITRO SENSITIVITY OF STAPHYLOCOCCUS AUREUS
TO CHLOROMYCETIN AND TO THREE OTHER ANTIBIOTICS*



Staphylococcus aureus, coagulase-positive, was isolated in pure culture from 99 of 100 consecutive cases of puerperal breast abscess requiring surgical treatment.
*Adapted from Knight & Nolan.⁴

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References: (1) Finland, M.; Jones, W. E., Jr., & Bennett, I. L., Jr.: *Arch. Int. Med.* 104:365, 1959. (2) Welch, H., in Welch, H., & Finland M.: *Antibiotic Therapy for Staphylococcal Diseases*, New York, Medical Encyclopedia, Inc., 1959, pp. 14, 16. (3) Nichols, D. R., & Martin, W. J.: *Surg. Gynec. & Obst.* 107:523, 1958. (4) Knight, I. C. S., & Nolan, B.: *Brit. M. J.* 1:1224, 1959.

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

PARKE-DAVIS

33660

THE N

cham

pot
th

July 29

THE NEWSMAGAZINE OF MEDICINE

MEDICAL WORLD NEWS

JULY 29, 1960 CONTENTS

PAGE

Late News

6

A CARDIOLOGIST'S HANDBOOK OF ERRORS 10

An expert's expert, Dr. Samuel Levine of Harvard, lists common pitfalls in everyday practice.

PERIODIC FEVER: A PUZZLE SOLVED 20

Hormone waste material may make temperatures soar.

'A VERY UNUSUAL PERSON' 21

Harvard's Woodward synthesizes chlorophyll and boosts his reputation as young wonder of organic chemistry.

Outlook

9

MINNESOTA FACES FACULTY FEE FIGHT 13

Old medical school controversy sets off squabble between staff and University Regents.

TANK THERAPY FOR CANCER 18

Oxygen and radiation combine in new attack on tumors.

Doctor's Business

28

PORTRAIT OF THE DOCTOR AS PATHOGEN 14

Pediatrician sketches ways MDs unwittingly induce disease.

OPEN DEBATE ON A CLOSED PANEL 22

Dispute divides N. Y. medical society and HIP physicians.

Departments

PUBLISHER'S LETTER.....8 NAMES IN THE NEWS.....31

LEGISLATIVE NEWS.....27 ADVERTISER LIST.....31

LETTER FROM THE EDITOR, CONT.....32

On the cover:
Oxygen pressure
chamber at Columbia-
Presbyterian
Medical Center
potentiates radiation
therapy for certain
types of cancer.
Story on p. 18.



MEDICAL WORLD NEWS is published bi-weekly by Medical World Publishing Company, Inc., 1230 Avenue of the Americas, New York 20, N. Y. Accepted as controlled circulation publication at Fairview, New Jersey. Subscription rates: \$12.50 per year to non-professionals; \$6.00 to non-qualifying physicians or persons in allied professions; \$15.00 for foreign subscriptions; single copies, 60 cents. © 1960 by Medical World Publishing Company, Inc. All rights reserved. Reproduction without specific permission is prohibited. CHANGE OF ADDRESS: Notification should be sent to Medical World News, 1230 Avenue of the Americas, New York 20, N. Y. Please give both old and new addresses, including zone numbers, if any. Printed in U.S.A. POSTMASTER: Please send form 3570 to Clark-O'Neill, Inc., 1 Broad Ave., Fairview, N. J.

in edema or

- more doctors are prescribing —
- more patients are receiving the benefits of —
- more clinical evidence exists for —



in congestive failure

"Chlorothiazide was given to 16 patients for a total of 295 patient-treatment days." "Chlorothiazide is a safe, oral diuretic with a clinical effect equal to or greater than a parenteral mercurial." Harvey, S. D. and DeGraff, A. C.: N. Y. State J. Med., 59:1769, (May 1) 1959.



in hypertension

"... our program has been one of polypharmacy in which we attempt to deplete body sodium with chlorothiazide. This drug is continued indefinitely as background medication for all antihypertensive drugs." Moyer, J. H.: Am. J. Cardiology, 3:199, (Feb.) 1959.



in premenstrual edema

"Chlorothiazide is an excellent agent for relief of swelling and breast soreness associated with the premenstrual tension syndrome, since all patients [50] with these complaints were completely relieved." Keyes, J. W. and Berlacher, F. J.: J.A.M.A., 169:109, (Jan. 10) 1959.

DOSAGE: Edema—One or two 500 mg. tablets DIURIL once or twice a day. Hypertension—One 250 mg. tablet DIURIL twice a day to one 500 mg. tablet DIURIL three times a day.

SUPPLIED: 250 mg. and 500 mg. scored tablets DIURIL (chlorothiazide) in bottles of 100 and 1,000.

DIURIL is a trademark of Merck & Co., INC.

Additional information is available to the physician on request.

hypertension

DIURIL[®]

(CHLOROTHIAZIDE)

than for all other diuretic-antihypertensives combined!



in edema of pregnancy

"One hundred patients were treated with oral chlorothiazide." "In the presence of clinically detectable edema, the agent was universally effective." "Chlorothiazide is at present the most effective oral diuretic in pregnancy." Landesman, R., Ollstein, R. N. and Quinton, E. J.: N. Y. State J. Med., 59:66, (Jan. 1) 1959.



in cirrhosis with ascites

"All three of the patients with Laennec's cirrhosis, ascites and edema had a favorable response, with a mean weight loss of 8 lbs., during the five-day treatment period with a slight decrease in edema." Castle, C. N., Conrad, J. K. and Hecht, H. H.: Arch. Int. Med., 103:415, (March) 1959.



in renal edema

"In a study of 10 patients with the nephrotic syndrome associated with various types of renal disease, orally administered chlorothiazide was a successful, and sometimes dramatic, diuretic agent." Burch, G. E. and White, M. A., Jr.: Arch. Int. Med., 103:369, (March) 1959.



MERCK SHARP & DOHME
Division of Merck & Co., Inc., Philadelphia 1, Pa.

LATE NEWS

TEN-MINUTE TEST AIDS HYPERTHYROID DIAGNOSIS

A ten-minute test of thyroid function, employing an intravenous injection of radioactive iodine, has increased diagnostic accuracy, according to Dr. H. P. Higgins of St. Michael's Hospital, Toronto.

In a study of 576 cases, the ten-minute uptake of I^{131} was found to be considerably more accurate in diagnosis of hyperthyroidism than the 24-hour uptake, Dr. Higgins told the annual meeting of the Canadian Medical Association in Banff, Alberta.

The test's accuracy compares favorably with that of the serum protein-bound iodine level determined in the same patients, Dr. Higgins said. Although the test does not distinguish iodine deficiency from hyperthyroidism and is not of value in the diagnosis of hypothyroidism and nontoxic goiter, it is of value in predicting the effect on nontoxic goiter of thyroid treatment: a fast uptake indicates favorable response.

HYPNOSIS DELIVERY HAS ADVANTAGES

Delivery under hypnosis is easier on the infant in some aspects, according to Drs. Frank Moya and L. Stanley James of Columbia University's College of Physicians and Surgeons. They did clinical and biochemical studies of 21 infants born to mothers under hypnosis, and compared these infants with a group of babies born under various anesthetic techniques.

Serial pH values indicated significantly better recovery patterns for the "hypnosis babies" for the one-to-35-minute interval after birth, but not for the 36-to-60-minute period. The "hypnosis babies" were also checked as to clinical condition one minute after birth, as evaluated by the Apgar score (which includes checking such signs as heart rate, respiratory effort, muscle tone and color). They did significantly better than the cyclopropane anesthesia control group, but not better than babies born under regional anesthesia, Dr. Moya commented.

"Serial determination of the acid-base status after birth showed a significantly greater ability of the hypnosis group to readjust rapidly and to recover from the asphyxia of birth. . . . These data indicate a definite superiority

of the hypnosis group in establishing and maintaining effective ventilation which was not revealed by careful clinical examination alone," the Columbia University team said.

BRAIN ELECTRICITY DIFFERS IN NORMALS AND NEUROTICS

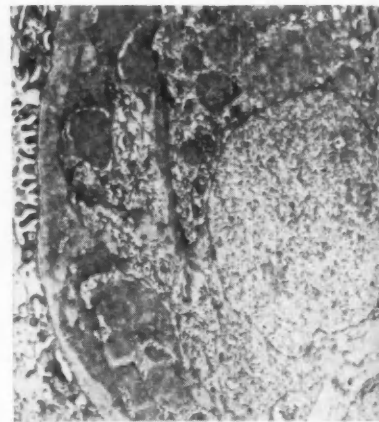
For the first time the electroencephalograph has revealed a major difference in brain function of normal and neurotic individuals.

In organically healthy but chronically anxious subjects, brain electrical function exhibits a defective response to external stimuli. These neurotic pa-

tients fail to form a special, temporary non-Pavlovian cerebral association as often as normal subjects. The association occurs when paired sound-light stimuli block alpha activity, Drs. Charles Wells and Harold Wolff, neurologists at Cornell Medical Center, New York, report in *Science*.

The difference between the readings is statistically significant. To the New York neurologists, this indicates "that the ability to develop conditioned cerebral responses is significantly impaired in a group of patients showing prolonged difficulties in adaptation and severe anxiety."

PRE-ECLAMPTIC RENAL PATHOLOGY ANALYZED



GLOMERULAR capillary is clear in normal pregnancy (l.), clogged in pre-eclampsia (r.).

Intensive diuretic therapy in pre-eclampsia reverses symptomatology far more than it does pathology, according to Dr. Willy Mautner and his co-workers at Mt. Sinai Hospital, N. Y. And although this condition is treated symptomatically, the underlying renal pathology is more severe in certain cases than the clinical picture indicates.

Dr. Mautner's electron microscope examination of renal biopsies from 17 pre-eclamptic women showed that the lumina of glomerular capillaries are narrower than normal both before and after treatment.

The decrease in lumen diameter is caused by swollen endothelial cells and unidentified deposits projecting from the basement membrane into the lumen. These patients are known to suffer a drop in renal plasma flow and

in filtration fraction.

This is exactly what might be expected, the New York pathologist said, if one considers that the reduced capillary lumen impedes the blood flow, while endothelial turgidity and the deposits impede the filtration process.

During treatment, proteinuria sometimes disappeared. This could be correlated with the disappearance of the deposits from the biopsy specimens. Nevertheless, the lumina failed to become normal: the swelling of the endothelial cells had become more severe.

After treatment, two patients had stillbirths, despite remission of pre-eclamptic symptoms. When treatment began, these women had the most marked endothelial swelling in the series, but they did not have the severest symptomatology.

ALDOSTERONE ANTAGONISM MECHANISM CLARIFIED

Spiralactones, the so-called aldosterone "antagonists," probably cause natruresis by antagonizing the effects of aldosterone on renal tubular function, not by any effect on the secretion, metabolism or excretion of aldosterone itself.

A group at Vanderbilt University, Nashville, Tenn., has made serial observations in six subjects before, during and after treatment with natruetic doses of spiralactone, and found that in all cases aldosterone secretion and excretion were undiminished up to a week. With the loss of body sodium during spiralactone treatment, however, there sometimes occurred a "secondary increase" in aldosterone secretion. Judging by the ratio of tetrahydro-aldosterone in the urine, the metabolism of aldosterone was unaltered by the spiralactone therapy, reports Dr. Eugene T. Davidson.

SKIN DIVER'S DIFFICULTIES ARE ACCORDING TO BOYLE

"If at first you don't succeed . . ." is an adage for the landlubber, not the skin diver. This species of human fish has a second chance — but only if he takes into account both Boyle's law and Dalton's law.

Dr. Gerald Duffner, the Navy's submarine medicine division director, Wash., D. C., says: "The single cause of all the diver's difficulties arises from the fact that air is compressible and water is incompressible." Result: as the skin diver goes down, the pressure goes up. Thus the volume of air in the lungs decreases, according to Boyle's law — while the partial pressure of either carbon monoxide or dioxide increases, according to Dalton's law. Should the diver fail to appreciate these laws, he will drown or become asphyxiated.

If he swims deeper than 33 feet, where the pressure on him and his air supply is greater than two atmospheres, he may go into convulsions: When oxygen is breathed at a partial pressure greater than 30 lbs. per square inch, it acts as a convulsant.

When the diver comes up, he decompresses. And the air which expands in his lungs must have a place to go. If he holds his breath or if the air remains involuntarily trapped, his

lungs may burst. If there is no respiratory explosion, the air may embolize in the pulmonary circuit and cause the "chokes" — choking sensations, chest pain and, in extreme cases, cyanosis.

ANTIBIOTIC PERFUSION AIDS CHRONIC OSTEOMYELITIS

Regional perfusion with antibiotics is yielding "promising" results in stubborn cases of chronic osteomyelitis.

Dr. Robert F. Ryan, Tulane University School of Medicine, New Orleans, reports that the technique has produced at least temporary remis-

sion in all eight patients treated thus far.

Originally developed at Tulane as a means of treating tumors with highly toxic drugs, regional perfusion involves isolation of the affected area with tourniquets. Circulation is maintained and medication applied by means of a heart-lung machine.

The osteomyelitic patients had developed resistance to standard antibiotics to the point where continued therapy required dangerously large doses. After perfusion, all patients had less pain and less drainage.

FREQUENCY OF ACCIDENT PRONENESS DENIED

"It has been erroneously stated and often repeated that a very small, accident-prone minority of the population is responsible for over 80 per cent of all accidents," said the assistant commissioner of the NYC Health Department at the AMA's Miami meeting.

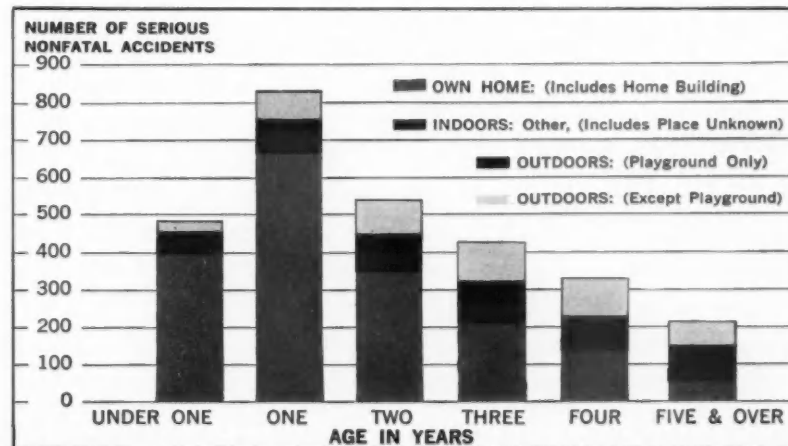
Dr. Harold Jacobziner told the section on preventive medicine that 2,826 nonfatal, nonpoisonous accidents, serious enough to be treated at the department's child health stations from 1952-59, occurred among 2,761 children, most of whom were under five years old. All except 58 children had one accident each. These 58 were repeaters, accounting for 123 of all accidents. "The majority of accidents are not limited to a small group of repeaters or 'accident prone' children," commissioner Jacobziner emphasized.

The child was under the direct su-

pervision of the mother in 67 per cent of the cases, the commissioner said, with most injuries taking place in the home. Suffering the greatest accident incidence were the 12 to 17-month-olds, "a high risk group." Males predominated in all age categories, a verification perhaps of the truism "boys are always getting into trouble."

The head was the chief target for injury, due mainly to falls. Burns usually occurred in the upper extremities. The most frequent of all accidents were lacerations (51 per cent), particularly in the one-year-olds of both sexes. Falls, causing 45 per cent of the accidents, resulted mainly from climbing, running, and colliding.

Playing with matches, contact with heating and cooking units and hot liquids produced burns in 20 per cent of the children.



HIGHEST RATE of accidents occurs to children under mothers' "direct supervision."

A LETTER FROM THE PUBLISHER

The adage "never judge a book by its cover" hardly applies to the magazine world. Unlike a book, a magazine must put its best foot forward before it's opened, which explains the emphasis editors place on covers that excite, intrigue and attract.

The covers of MEDICAL WORLD NEWS offer a pointed demonstration of the value of experimenting. We faced the problem for the first time in January when our Pilot Issue was distributed to a small sampling of physicians. The cover displayed the words WHAT PRICE DRUG\$ in ochre against a jet black background. The issue featured special articles by Senator Estes Kefauver and Dr. Austin Smith of the Pharmaceutical Manufacturers Association. (We'll be glad to send you a copy as long as our supply lasts).

The response to that black cover was so encouraging that we have been using a black background ever since. But art director Chris Magalos is still experimenting with what goes on the background. From behind an overcrowded drawing board, this dark-haired young man (who is as fluent in Greek as English) directs the search for the best cover illustrations, as well as designing and styling our editorial pages. Even though he's held out for black covers to date, Chris — like all of us — knows that we're still responsive to new currents of thought, still searching for better ways to translate news into words and pictures. The next cover, in fact, may not be black, but white.

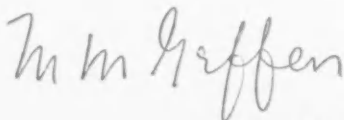
Inside the magazine, too, we seek to be receptive to fresh ideas, different points of view.

In a recent MEDICAL WORLD NEWS editorial, for example, Dr. Morris Fishbein approved the American Epilepsy League's plan for providing prescription drugs by mail. After we went to press with Dr. Fishbein's comments, the American Medical Association, in its annual session, took a stand against this practice. Said the House of Delegates: We agree with representatives of the pharmacy profession that "the unorthodox practice of mail order filling of prescription drugs is not in the best interest of the patient. . . ."

This seeming divergence of opinion between Dr. Fishbein and the organization he served so long and so effectively as spokesman is typical of the honest differences which may occur between men of science. It is this free and open debate, this search for the best answer, that makes the reporting of medicine such an exciting and fruitful adventure.

In this issue, for instance, we give you the essence of one man's long experience in diagnosing heart disease. Some physicians perhaps will disagree on details, and, if so, we hope to receive and publish their remarks. On an entirely different front, we will present in forthcoming issues the positions of Republican and Democratic presidential candidates on matters vital to the physician's practice. And we will continue to inform our readers on the other important, unsolved questions.

This does not mean that MEDICAL WORLD NEWS will act merely as a funnel through which masses of unselected facts and opinions are to be poured. Rather—cover to cover—we intend to exercise selection and judgment, serving as a filter for the dissemination of vital medical knowledge and information.



Publisher

MEDICAL WORLD NEWS

EDITOR

Morris Fishbein, M.D.

EDITORIAL ADVISORY BOARD

Harold S. Diehl, M.D.

Frank L. Horsfall, Jr., M.D.

Chester S. Keefer, M.D.

Irvine H. Page, M.D.

Howard A. Rusk, M.D.

Theodore R. Van Dellen, M.D.

EXECUTIVE EDITOR

William H. White

ASSOCIATE EDITORS

Mae Rudolph: ARTICLES

Alex Gordon: NEWS

Robert Claiborne

Alexander Dorozynski

Jean Watson

Edwin K. Zittell

CONTRIBUTING EDITORS: Wallace Croatman, Leonard Engel, John Foster, Jacqueline Seaver.

CORRESPONDENTS: *Ann Arbor*, William Bender, Jr.; *Atlanta*, Edwina Davis; *Boston*, Jane McCammon; *Buffalo*, Mildred Spencer; *Chicago*, Theodore Berland; *Detroit*, Jean Pearson; *Ft. Worth*, Blair Justice; *Kansas City*, Odom Fanning; *Louisville*, Robert Clark; *Miami*, Robert Blakley; *Milwaukee*, James C. Spaulding; *New Orleans*, John Wilds; *Oklahoma City*, Imogene Patrick; *Omaha*, Marcia Mickelsen; *Pittsburgh*, Albert Bloom; *Philadelphia*, Pierre Fraley; *San Francisco*, George Dusheck; *St. Louis*, Patricia Page; *Seattle*, Hill Williams; *Toledo*, Ray Bruner; *Mexico City*, Emil Zubryn; *London*, Neil Herzog; *Rome*, John Carter; *Stockholm*, Per Bergstom; *Toronto*, David Spurgeon; *Tokyo*, Norman Sklarowitz.

EDITORIAL RESEARCHERS: Herbert Kirshenbaum, Shirley Segall, Benita Steinweg.

EDITORIAL ASSISTANTS: Carole Pomerantz, Loretta Ponzini, Dorothy Quaranta.

ART DIRECTOR

Christopher Magalos

PRODUCTION

William J. Marsik

ASST. TO EXECUTIVE EDITOR

Reba Berlin

SALES DIRECTOR

William J. Egan, Jr.

EASTERN REPRESENTATIVE

Peter H. Lewis

PUBLISHER

Maxwell M. Geffen

LD
S

D

D.

Wallace
Foster,

William
Boston,
ed Spen-
Detroit,
Justice;
Louisville,
ley; Mil-
Orleans,
ene Pat-
ttsburgh,
e Fraley;
St. Louis,
Williams;
Emil Zu-
me, John
Toronto,
n Sklare-

ert Kirsh-
Steinweg.

e Pomer-
Quaranta.

TOR

IVE

LD NEWS

OUTLOOK

- Nation's governors back Federal aid to aged
 - Temporal bones sought for deafness research
-

The floating medical center "Hope", sponsored by the People-to-People Foundation of Washington, D. C., leaves Sept. 23 for the Far East. A medical, dental and nursing staff of 73 has been selected from more than 1,500 applicants, and some \$3,500,000 has been raised to insure the ship's operations for a year. The staff will treat patients at ports of call and consult with local doctors, particularly on problems of yaws, malnutrition, malaria, and tuberculosis.

The nation's governors are on record, 30 to 13, as favoring use of the Social Security system to provide medical care for the aged. Led by Gov. Nelson Rockefeller of New York and Gov. G. Mennen Williams of Michigan—a Republican and a Democrat—the state leaders took the pro-Forand position during the recent governors' conference in Glacier National Park.

A national campaign to establish temporal bone banks has been launched by the Deafness Research Foundation. The two-year-old organization is asking those with impaired hearing to will their temporal bones for scientific study, as did the late actress Margaret Sullivan.

The pressing need for this material was underscored by Dr. John R. Lindsay, president-elect of the American Laryngological, Rhinological and Otological Society and chairman of the otolaryngology department at the University of Chicago. Since people don't die of hearing loss, the secret of otosclerosis is generally "buried with them." Those who wish to make donations, the Foundation said, must have a documented case of hearing impairment and must obtain consent from the next of kin. A form giving specific directions about arrangements may be obtained from the Foundation at 310 Lexington Ave., New York 16, N. Y.

The "giving public" will have all the facts on voluntary health and welfare agencies, if the Rockefeller Foundation has its way. The Foundation, noting that "public confidence in the voluntary way must not be undermined," has appointed a committee of 21 civic leaders to begin a one-year exploratory study of such agencies. Among the questions they may ask: How many agencies are needed? To what extent is there duplication? Are so many fund solicitations needed? What are agencies doing with the money they receive?



From cardiologist, Sa

HAI

An expert's exp

In his 41 years of practice, Dr. Samuel A. Levine has gathered a wealth of ideas on the diagnosis, treatment and prognosis of heart disease. Among the chief tenets of the man for whom Harvard University established a professorship six years ago is: "Errors made in the practice of cardiology are no longer purely academic."

At a recent meeting of the American Cardiology Association, the man who "wrote the book" on coronary thrombosis outlined a map of mistakes — the ones he makes, those others make. Each one counts heavily, he emphasizes, because conditions once considered hopeless now may be treated. Here, in brief, **MEDICAL WORLD NEWS** presents some of the hints, clues and sounds that Dr. Levine believes signal cardiac trouble.

ERRORS IN DIAGNOSIS

MASKED THYROCARDIACS all too frequently go undetected, particularly when some other heart condition such as coronary, hypertensive or rheumatic valvular disease is also present, and exophthalmus and goiter are not. It may be well to think of the thyrotoxic state when faced with an unexplained auricular fibrillation or a rapid, grossly irregular ventricular rate which fails to respond to adequate digitalis therapy.

clues: Look for a faint stare to the eyes; a slight tremor of the fingers; an excessive appetite; a preference for cold weather; early graying of the hair; a warm, hyperemic, somewhat pigmented or salmon-colored face.

tests: Once diagnosis of thyrocardiac disease is considered, laboratory tests can reliably confirm—or eliminate—diagnosis of hyperthyroidism.

addenda: A hyperactive thyroid

gland
sole c
heart f
reversi
cured.

MYXED
to diag

clue
x-rays
tion, y
is not
quiring
may o
normal

CONST
too of
corona
the pa
flatten

clue
cervic
over 2
nevert
Watch
bound
can be
or for
fused
imme
not pr

test
veal e
tion. V
operat
peutic
the ris

AS FO
less h
physic
if he
diseas
chest
will b

ologist, Samuel A. Levine

HANDBOOK OF ERRORS

41 years of experience in diagnosing the heart

gland of itself can occasionally be the sole cause of advanced congestive heart failure. This trouble is entirely reversible, if the thyrotoxicosis is cured.

MYXEDEMA HEART DISEASE is not hard to diagnose, once you think about it.

clues: Suspect this syndrome when x-rays show unexplained cardiac dilation, yet venous pressure is normal. It is not generally known but ascites, requiring repeated abdominal tapplings, may occur with myxedema. All abnormalities vanish on thyroid therapy.

CONSTRICTIVE PERICARDITIS is much too often overlooked or regarded as coronary artery disease, particularly if the patient has atypical chest pain and flattened or inverted "T" waves.

clues: Look for markedly distended cervical veins and a venous pressure of over 250 mm in a patient who can nevertheless lie flat comfortably. Watch especially for a diastolic rebound at the apex of the heart which can be heard and often seen and felt, or for a patient with a strikingly suffused appearance to the face and neck immediately on lying down—which is not present in the upright position.

tests: X-ray examination may reveal evidence of pericardial calcification. When in doubt, an exploratory operation is justified because the therapeutic result may be remarkable and the risk is very slight.

AS FOR ANGINA, it would seem that less harm is done to the patient if the physician overlooks the diagnosis than if he makes it when there is no heart disease. When the discomfort in the chest is real, the patient's symptoms will be a guide to his activities. Re-

member, if angina is diagnosed but not actually present, the patient may be made miserable by constant fear and an unnecessarily restricted life.

clues: Although the most common circumstance which precipitates cardiac pain is walking uphill or in cold air, there are numerous exceptions. Cardiac pain may come at rest, in bed, to the same patient who briskly walks the streets undisturbed.

tests: A simple new one—the carotid sinus test—when positive is practically specific. When the patient is having a spontaneous spell, massage the carotid sinus, but only for a few seconds, preferably when he is sitting up. If there has been a slowing of the heart, promptly ask if the pain was made worse. It is important to ask this misleading question. If the patient answers something like "No, the pain is letting up" or "No, it's gone"—that pain was anginal. Relief comes in seconds, not minutes. In addition, of course, there is the response to nitroglycerine and the Master two-step test.

addenda: Ascribing anginal chest pain or distress to hiatus hernia, gallstones, peptic ulcer or spinal arthritis is a snare. Too often blame is put on an innocent, symptomless hiatus hernia when it is all due to the heart.

DISSECTION OF THE AORTA may be hard to distinguish from an acute coronary episode, but this difference is no longer rhetorical; aortic dissections can be operated on with success.

clue: One peculiar and characteristic type of pain that comes in aortic dissection cases is a sudden severe pain in the back of the mouth.

ACUTE BENIGN PERICARDITIS can be distinguished from acute myocardial

infarction with pericarditis by remembering that simple pericarditis is more frequent in younger individuals and the pain is aggravated by breathing.

clue: Left pleuritis with effusion is common with acute benign pericarditis, rare with a coronary. If pleural fluid is found on the right side, suspect a coronary.

test: Pericardial fluid sufficiently marked to be recognized by an increase in the cardiac silhouette on x-ray examination is very rare in myocardial infarction, but common with "simple" pericarditis.

IN DYSPNEA, an assumption that the cause is heart trouble is often incorrect. There are many causes of breathlessness, some of which are essentially benign.

clues: If the patient awakens from sleep breathless, has to sit up with his feet hanging over the side of the bed, has a cough and wheeze and obtains relief, not in a minute or two but in 15—then one can be fairly sure the patient has severe heart disease. Functional cardiacs practically never have paroxysmal nocturnal dyspnea.

tests: Errors can be avoided by some simple clinical observations. Rales in the lungs, when due to emphysema, are squeaky, sibilant or very coarse, both inspiratory and expiratory, and are often heard in the front as well as the back of the chest. Those of congestive heart failure are heard at the base of the lungs.

A most helpful guide: When x-rays show low diaphragm, hyperaerated lungs and a small or normal sized heart, it is extremely unlikely that heart failure is present. Asthma is then most likely bronchial rather than cardiac in origin.

CONTINUED

HANDBOOK CONTINUED

addenda: The point to bear in mind is that most patients who have emphysema are short of breath but have no heart failure for long periods of time—many years, in fact.

ATRIAL FIBRILLATION is too readily regarded as indisputable evidence of organic heart disease. There is a significant group in which this irregularity occurs who have no detectable heart disease. The symptom may be the result of a diseased thyroid gland.

clues: If rheumatic valvular disease, hypertensive heart or myocardial disease can be eliminated in the usual ways, look for hyperthyroidism.

addenda: Atrial fibrillation may be annoying but generally by itself does not produce gross heart failure. If it is uncontrolled and lasts long enough, however, cardiac enlargement and congestive failure can result.

MITRAL STENOSIS—in the past, it mattered little whether the diagnosis of this entity was made or not, or if the degree of stenosis was known. Little could be done. Now it is often vital to know these details.

clue: In auscultation of the heart, the physician must concentrate his attention on one feature at a time. He must tell himself that for the next 10 to 20 seconds he will listen to the diastolic interval at the apex with such intensity that he will not be able to say whether a systolic murmur is present or not. All he knows about is the diastole; he has focused his attention exclusively on it.

PULMONARY EMBOLISM should be considered a possibility in all chronic cardiacs. Overlooking embolisms is asking for trouble.

clues: Remember, embolisms occur as single events and in repetitive form; they can arise in the veins of the legs as well as those of the pelvis; they can occur in the absence of heart disease.

When small emboli keep occurring, right-sided failure may develop, a result of cor pulmonale.

tests: The typical acute episode presents no problem in diagnosis when all the signs are clear: sudden collapse; faintness or dyspnea with or without unilateral chest pain; subsequent cough and bloody sputum; a rising heart rate following slight fever for a few days; signs of thrombophlebitis of the calves; EKG signs of acute cor pulmonale; x-ray evidence of pul-

monary infarction or of localized ischemia of the lungs.

addenda: The difficulty is greater when few or none of these features are present or are insufficiently distinctive. I have frequently overlooked pulmonary embolism despite care.

ERRORS IN TREATMENT CONGESTIVE HEART FAILURE

Digitalis: It is a too common experience to find that a patient with chronic congestive failure is markedly underdigitalized although he has been taking the so-called maintenance dose.

Phlebotomy: This is a much neglected therapeutic procedure in the practice of cardiology. I have no doubt whatever but that removing 500 cc of venous blood has been life-saving in some of my desperately ill patients, where the usual method of tourniquets, aminophylline, morphine and oxygen have been of no avail.

Thoracentesis: The presence of a hydrothorax, especially on the right, is frequently overlooked. Even when recognized, the amount of pleural fluid is generally underestimated and its importance belittled. Simple bedside examination is all that is necessary to detect hydrothorax.

It is not logical to deny to the chronic cardiac the relief obtained by a chest tap just because hydrothorax

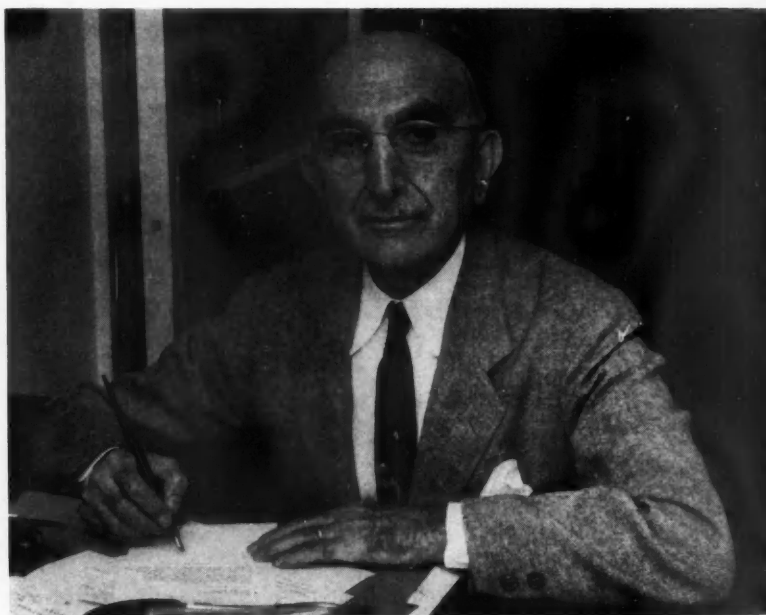
often returns. When it does the procedure can be repeated; it is not difficult.

PERSISTENT ATRIAL FIBRILLATION

Quinidine: It leaves much to be desired in general practice. The principle to remember is that large doses of quinidine do some harm while trying to accomplish some good. Quinidine, like digitalis, should be regarded as a cardiac toxin. If the patient does not respond to a certain dosage in a day or two, nothing is gained, and often ill effects result from continuing the dosage day after day. Proper use of quinidine requires close scrutiny.

Anticoagulants: There is no known statistical study to answer the question of whether or not to use anticoagulants with quinidine for persistent atrial fibrillation. There are rare occasions on which peripheral arterial emboli have occurred after reversion to normal sinus rhythm. I have no doubt that quinidine is responsible for this uncommon complication.

It is not known how long before starting quinidine it is wise to give an anticoagulant. One course to follow is to give heparin in doses of 50 to 75 mg intramuscularly every six hours, beginning a day or so before quinidine is started. Continue until the quinidine is stopped, or until 24 hours after return to a normal sinus rhythm. ■



ON ERRORS IN PROGNOSIS: "Physicians should hesitate to try to take on the role of the Lord. It is well for us to be hopeful, if at times we must be cautious. It is best to keep the door a little ajar. If we err, it is better to err on the side of optimism. We are physicians, not prophets."

proce-
fficult.

ON
to be
prin-
doses
le try-
Quini-
garded
t does
e in a
t, and
inuing
er use
iny.

known
estion
coagu-
sistent
re oc-
arterial
ersion
ve no
ble for

before
ive an
flow is
75 mg
rs, be-
nidine
nidine
ter re-

o take
ust be
err on

D NEWS



SURGEONS at Minnesota, who attract most patients, are in center of furor over fees.

MINNESOTA FACES FACULTY FEE FIGHT

**University raises question:
How much private practice
should the staff be allowed?**

A controversy which nearly 50 years ago led to a complete reorganization of the University of Minnesota Medical School—and a problem which nags medical leaders everywhere—has broken out again in Minneapolis.

In the early 1900's, the School was ordered to remove large numbers of part-time teachers who had downtown practices and to build up a full-time staff. This year the squabble is more dignified and muted. As described by the new and youthful dean of medical sciences, Dr. Robert B. Howard, the question is twofold:

- Should a university be compensated for outside consultations by faculty members, and for services, facilities and equipment provided in connection with private practice?

- How much outside practice can a full-time faculty member conduct—without cutting into the teaching and research program of a medical school?

At Minnesota the answer to the first question is now, "yes". On the basis of a 47-year-old ruling, the University's regents have voted to assess doctors five per cent of the fees they collect from private patients treated at University hospitals.

A partial answer to the second, more basic question is the decision to make a two-year study of possible limitations on the private practice of full-time members. A study group, to be made up of department heads and elected members of the faculty, will be appointed this fall.

The new five per cent assessment is to be handled on the honor system. The first \$2,000 of income is exempt and all payments will be tax deductible as business expenses. Money handed over to the University will replace funds now used to pay for facilities, services and equipment in the hospitals. The amount thus saved will be used for other University functions—excluding increased faculty salaries—or to reduce the University's needs for tax funds. Dr. Howard is unable to estimate the amount the University will realize from the new policy.

The assessment will be levied on a doctor's gross income from fees received for in- or outpatients treated at University hospitals only. Fees for services rendered in University facilities for patients in other hospitals also will be assessed.

Dean Howard said the old regents ruling wasn't enforced until now, since the number of private patients treated by staff members had been negligible. But at present, about 6,000 of the 17,000 patients treated at University hospitals each year are private patients.

Faculty discussion of the new

policy began last fall, starting with department heads who agreed—although not unanimously—that new policies were needed. Next, Dr. Howard presented the proposal to the entire medical school faculty in April. And finally, a few weeks ago, the Board of Regents adopted the proposals without audible dissent. Sitting on the Board is Dr. Charles W. Mayo, nephew of Dr. Will Mayo who was a regent himself in the early days of the century when the problem first arose.

While the extent of opposition to the new policy is hard to measure, it has stirred much comment among medical faculty members, the staff in other University departments and medical practitioners not affiliated with the University. Dr. C. Walton Lillehei and Dr. Owen Wangenstein, who probably have done most to make Minnesota a mecca for surgery patients, have not commented on the new policy, although the latter is reported to favor it.

Surgeon Speaks Out

On the other hand, one of Dr. Lillehei's associates in the development of open-heart surgery, Dr. Richard L. Varco, has taken an uncompromising stand against the policy. Declares Dr. Varco:

"One of the reasons for the greatness of the University of Minnesota Medical School, and one of its attractions for getting and holding men, is the freedom and emphasis on personal philosophy. Anything that inhibits recruiting and faculty retention is harmful."

Some medical faculty members who have no private practice are expressing concern over the possible effects of the intra-faculty squabble at the Medical School. Says Dr. Robert A. Good, research professor of pediatrics:

"The climate of this school is vital. There are extremely strong feelings on both sides. We must study this carefully and go very, very slowly before we do anything."

Dr. Good and several others stress they are more concerned about the long-range effects of possible limitation on private practice than about the 5 per cent assessment.

Opponents of the new measure quote a study on faculty attraction and retention at Minnesota, made by the University's bureau of institutional

CONTINUED

MINNESOTA CONTINUED

research, which reports:

"A number of staff members in the medical sciences said that if the University did not provide office and clinic space for private care patients, they could not afford to stay here."

Dr. Howard points out that while Minnesota medical school salaries are not among the highest in the country, they compare well with the average. Several professors on the faculty who are not department heads, he says, earn \$15,000 to \$16,000 a year. Department heads are getting more.

Dean Howard refuses to speculate how much some of the faculty members earn on the outside, but the guess is that the sum is several times their annual salary.

No organized attempts have been made by the medical societies to influence the University regents in favor of limitations on faculty members, but the income of University physicians with private patients long has been a subject of conversation among downtown practitioners in the "Twin Cities."

Neither has there been any organized push among faculty members in other University departments for any limitation of outside practice. But Medical School developments are be-



DEAN Howard revives old Regents rule.

ing watched with keen interest by faculty members, especially in the Institute of Technology and the School of Business Administration, two fields in which consulting jobs from private industry and government come up frequently.

University spokesmen say there is no policy on the matter, with individual faculty members making their own agreements with department heads. ■

PORTRAIT OF THE DOCTOR AS PATHOGEN

A U. S. Navy pediatrician sketches three types of physicians who unwittingly induce diseases by the way in which they treat them

Is there a pathogenic doctor in the house?

Quite possibly, says Lieutenant K. W. Sell, a pediatrician attached to the U. S. Naval Hospital at Bethesda, Md. Physicians who, by grunts and grimaces, unwittingly generate anxiety in patients or their families, he says, can become "a source of iatrogenic disease, discomfort and woe."

Writing in the *Clinical Proceedings of the Children's Hospital* (Washington, D. C.), Lt. Sell describes three species of medical pathogens.

Top spot goes to the "alarmist," defined as "the doctor who feels compelled to point out all the dire potentialities of a patient's disease." Such a doctor can induce "overwhelming concern in the patient, and may predispose to the stool-gazing, temperature-taking, pulse-counting mother," with symptoms of hypochondriasis not far off.

The alarmist "can also ply his trade by the indirect but equally devastating method of the 'touch' and the 'verge.'" A doctor who describes a child as having a "touch" of pneumonia or rheumatic fever or virus, or being "on the verge" of encephalitis or breakdown, offers parents "an excellent excuse for the observation of the child's every moan and groan as a possible precursor of recurrent disease."

An even more subtle — and frequent — variety of alarmist, says Lt. Sell, communicates anxiety by non-verbal techniques: "A murmur while looking at the tonsils, lingering during the heart examination, shaking of the head while looking at the normal infantile bowed legs."

Next comes the "polypragmatist."

This species of physician-pathogen, suggests Lt. Sell, employs an "all-encompassing attack including tonics, sedatives, repeated vitamin B-12 injections, enemas and restrictive diets, all intended to leave no doubt as to the thoroughness of his medical care."

The polypragmatist "tries to rationalize his overuse of drugs rather than accept their placebo value. He also tends to use dangerous drugs where an innocuous drug or a placebo would be much more acceptable." As an example of polypragmatism in action, Lt. Sell cites the prescription of a broad-spectrum antibiotic in mild garden-variety measles as a prophylactic against complications.

Need to Impress Patient

Lastly, there is the "demonstrator," the physician who feels impelled to impress the patient with his ability. To convince the patient of the correctness of his diagnosis, the demonstrator confronts his cases with x-ray plates, medical articles and similar bits of corroborative detail.

If these demonstrations are accompanied with "thoughtful explanations" the result will merely be a well-informed patient or parent, Lt. Sell concedes. However, "the accumulation of confusing medical terms, strange x-rays and explanations dotted with medical jargon may well result in a patient who has the impression that he is not long for this world."

He also warns that some parents, especially susceptible to iatrogenic disease, can contract it from "a single contact resulting in an activation of an already latent oversolicitousness."

Lt. Sell suggests that iatrogenic disease often stems from a misdirected "zeal for preventive medicine." Physicians, while rightly urging prophylactic immunization and similar measures, too often do so by emphasizing "the terrible potentialities of non-compliance." A good preventative for iatrogenic disease, he says, would be a change of emphasis "from the fearful alarm of future possibilities to the concept of keeping the child healthy now." ■

WHY **ALDACTONE**[®] IN EDEMA

Because it acts by regulating a basic physiologic imbalance, Aldactone possesses multiple therapeutic advantages in treating edema.

Aldactone inactivates a crucial mechanism producing and maintaining edema — the effect of excessive activity of the potent salt-retaining hormone, aldosterone. This corrective action produces a satisfactory relief of edema even in conditions wholly or partially refractory to other drugs.

Also, Aldactone acts in a different manner and at a different site in the renal tubules than other drugs. This difference in action permits a true synergism with mercurial and thiazide diuretics, supplementing and potentiating their beneficial effects.

Further, Aldactone minimizes the electrolyte upheaval often caused by mercurial and thiazide compounds.

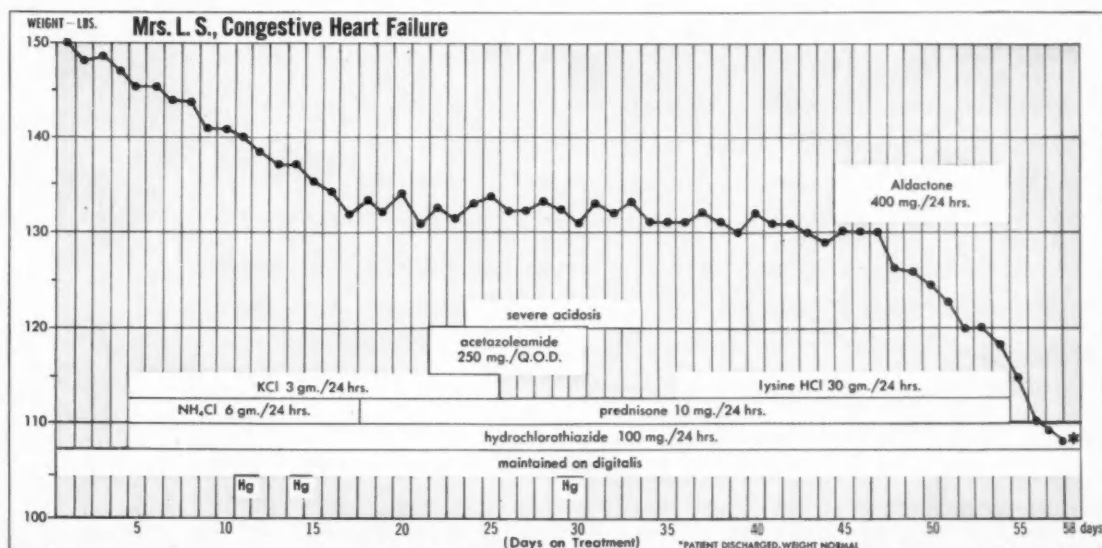
The accompanying graph shows a dramatic but by no means unusual instance of the effect of Aldactone in refractory edema.

The usual adult dosage of Aldactone, brand of spironolactone, is 400 mg. daily. Complete dosage information is contained in Searle New Product Brochure No. 52.

SUPPLIED: Aldactone is supplied as compression-coated yellow tablets of 100 mg.

G.D. SEARLE & CO., Chicago 80, Illinois.

Research in the Service of Medicine.



Triburon Hydrocortisone



CONSISTENT RESPONSE IN SKIN INFECTIONS

REGARDLESS OF VIRULENCE, RESISTANCE, CHRONICITY

TRIBURON, THE DISTINCTIVE ANTIMICROBIAL, PREVAILS OVER PRIMARY AND SECONDARY INVADERS PROMPTLY, SAFELY, WITHOUT PRODUCING SIGNIFICANT BACTERIAL RESISTANCE. NOW AVAILABLE IN THREE FORMS: NEW TRIBURON HYDROCORTISONE CREAM FOR PRURITIC, INFLAMED, OOZING OR WEEPING INFECTIONS, TRIBURON OINTMENT FOR SKIN AND WOUND INFECTIONS, TRIBURON-HC OINTMENT TO COUNTER ITCHING AND INFLAMMATION AS WELL AS INFECTION.

TRIBURON HAS AN IMPRESSIVE CLINICAL RECORD:

- HIGHLY EFFECTIVE ● DRAMATIC RESPONSES IN CHRONIC CONDITIONS
- MICROBICIDAL EVEN AGAINST RESISTANT STRAINS OF STAPH. AND STREP., INCLUDING FOUR STRAINS OF STAPH. PHAGE GROUP 80/81
- VIRTUALLY NONSENSITIZING AND NONIRRITATING ● STAINLESS, ODORLESS, HIGHLY ACCEPTABLE

EFFECTIVE THERAPY FOR IMPETIGO, FOLLICULITIS, FURUNCULOSIS, ECTHYMA, ECZEMA, ACNE, ATOPIC DERMATITIS, NEURODERMATITIS, CONTACT DERMATITIS, STASIS ULCERS, HYDRADENITIS, SEBORRHEIC DERMATITIS, INFECTIOUS ECZEMA-TOUS DERMATITIS, WOUNDS, LACERATIONS AND BURNS.

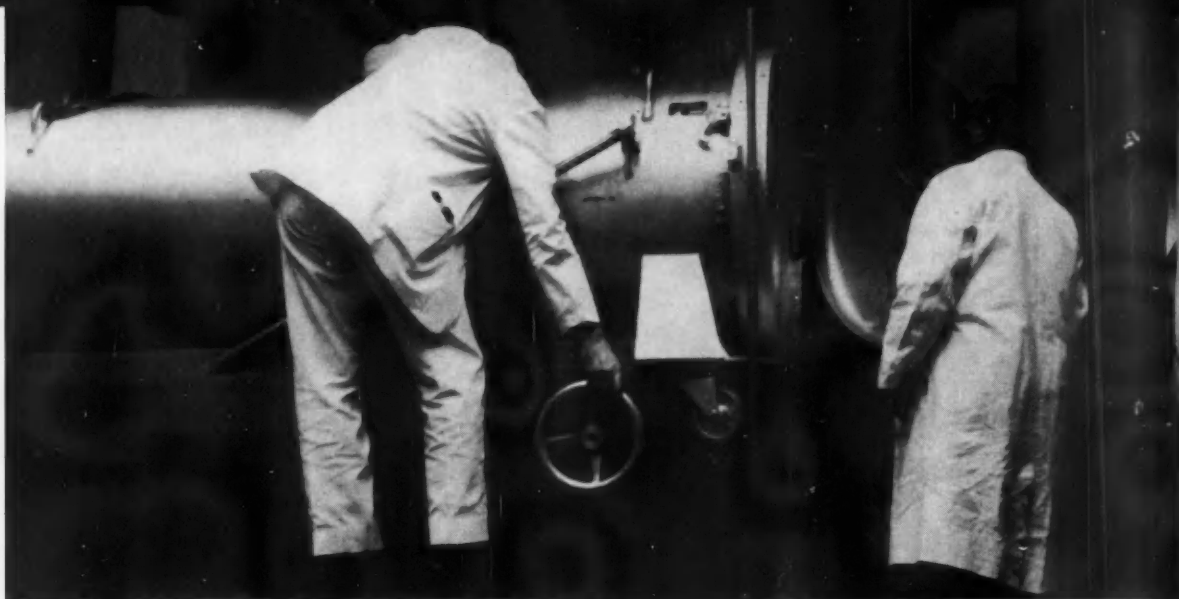
TRIBURON HYDROCORTISONE CREAM (0.1% TRIBURON CHLORIDE PLUS 1.0% HYDROCORTISONE IN A VANISHING-CREAM BASE) 5-GM AND 15-GM TUBES. TRIBURON-HC OINTMENT (0.1% TRIBURON CHLORIDE PLUS 0.5% HYDROCORTISONE IN A WATER-SOLUBLE BASE) 5-GM AND 20-GM TUBES. TRIBURON OINTMENT (0.1% TRIBURON CHLORIDE IN A WATER-SOLUBLE BASE) 1-OZ TUBES AND 1-LB JARS.

TOPICAL MICROBICIDE • NOT AN ANTIBIOTIC • NOT A NITROFURAN

SELECTED BIBLIOGRAPHY: 1. R. J. SCHNITZER, E. GRUNBERG, W. F. DELORENZO AND R. E. BAGDON, ANTIBIOTICS & CHEMOTHER., 9:267, 1959. 2. R. C. V. ROBINSON, ANN. NEW YORK ACAD. SC., 82:(ART. 1), 144, 1959. 3. E. EDELSON, E. GRUNBERG, A. D. CALABRESE AND T. V. MORTON, IBID., P. 124. 4. P. L. WILLIAMS, IBID., P. 135. 5. F. T. BECKER AND J. L. TUURA, IBID., P. 131. 6. S. M. BLUEFARB, IBID., P. 119. TRIBURON® CHLORIDE - N,N'-BIS[1-METHYL-3-(2,2,6-TRIMETHYLCYCLOHEXYL)PROPYL]-N,N'-DIMETHYL-1,6-HEXANEDIAMINE BIS (METHO-CHLORIDE)



ROCHE LABORATORIES • DIVISION OF HOFFMANN-LA ROCHE INC • NUTLEY 10, N. J.



OXYGEN CHAMBER, with patient inside, is moved along tracks into position under 22.5 million electron volt betatron.

TANK THERAPY FOR CANCER

The increased radiation sensitivity of certain tumor cells under high oxygen pressure is being used to treat selected patients at New York's Columbia-Presbyterian Medical Center

Variations in the radiation sensitivity of human cells provide the basis for a new method of treating localized tumors. It is being used for the first time in the U. S. at New York's Columbia-Presbyterian Medical Center.

The rationale is simple. All cells are sensitive to radiation. But oxygen deprivation reduces sensitivity and

produces radiation "protection." If—as is supposed—there are oxygen-poor cells in neoplasms, the forcing of oxygen into them should remove the protection and make them susceptible to radiation therapy (without much increasing the sensitivity of other cells).

This hypothesis is being clinically applied every week at Columbia-Pres-

byterian by the basically simple method of placing the patient in a chamber, raising the atmospheric pressure of inspired oxygen and then irradiating the tumor.

Patients treated so far have been limited to those in whom the tumor or lesion is relatively advanced and probably contains some cells resistant to conventional radiation because of oxygen lack, and whose entire tumor area is small enough to be included in the narrow field of irradiation, according to Dr. Cyril Sanger.

At Presbyterian Hospital, the



ANESTHESIOLOGIST Sanger heads team.



PATIENT is anesthetized to prevent convulsions during oxygen-radiation therapy.

select
ment
anest
vulsio
A
the p
hemo
ture
ally
hold
place
ber. T
previ
mark
doubt
taken
T
massi
betat
cisely
wall.
gen a
In
reach
The
prote
view
In the
cardi
and
patie
audib
A
the o
press
to his
T
been
on th
H. G
was a
pract
radia
T
1954
radio
anest
were
Lond
Colum
clude
tor of
Hosp
old V
aware
the N
have
and
lungs
"S
oxyge
and t
tional

selected patient is taken to a basement radiotherapy area where he is anesthetized, to prevent oxygen convulsions and anxiety during treatment.

An otolaryngologist punctures the patient's ear drums to prevent hemorrhage of the middle ear or rupture of the tympanic membrane. Finally, with foam-rubber cushions to hold him in the proper position, he is placed inside the huge oxygen chamber. The exact spot to be irradiated—previously determined by x-rays—is marked on the outside of the tank and double-checked with a radiograph taken through the steel tank.

The tank is wheeled under the massive 22.5 million electron volt betatron. The beam cone is placed precisely against the mark on the tank wall. Then the tank is flushed of nitrogen and filled with pure oxygen.

In a few minutes, the pressure reaches 45 pounds per square inch. The therapy team withdraws to the protected control room, where they view the tank through a glass window. In the control room, constant electrocardiographic, pulse, blood pressure and temperature readings gauge the patient. His breathing is continuously audible through a microphone.

After 20-40 minutes of treatment, the oxygen chamber is cautiously depressurized and the patient is returned to his room to recover from anesthesia.

This painstaking procedure has been worked out over the past six years on the basis of a suggestion by Dr. L. H. Gray, English radiobiologist, who was among the first to point out the practicality of combined oxygen-and-radiation therapy.

The technique was developed in 1954 by Dr. Ian Churchill-Davidson, radiotherapist, Dr. R. H. Thomlinson, anesthesiologist, and Dr. Sanger, who were then at St. Thomas' Hospital in London. Dr. Sanger now is with the Columbia-Presbyterian team which includes Drs. William B. Seaman, director of radiology service at Presbyterian Hospital, Norah duV. Tapley and Harold W. Jacox. Working under a grant awarded to Columbia University by the National Institutes of Health, they have so far treated tumors in the head and neck region, chest, esophagus, lungs, and pelvis.

"Since radiation under increased oxygen pressure is more complicated and time consuming than the conventional method, the level and frequency

of radiation dosage becomes a particularly significant factor in this new technique," says Dr. Tapley. At present, each patient receives a local dose of 1,000 r every week for a three-week period — to make a total of 3,000 r compared to 4,500-7,000 r in four to eight weeks of conventional treatment.

"As far as we can determine at the moment," she comments, "primary and secondary tumors have regressed

markedly in several treated patients." But the team adds that many more cases must be studied before valid statistics can be compiled. In Great Britain, an evaluation of the 80 patients treated up to 1958 shows complete resolution of primary and secondary growths in 28, with 13 patients still alive three and a half years after treatment. Prognosis for all these patients had been poor. ■



POINT for radiation is predetermined by x-rays, then marked on oxygen chamber wall.

TREATMENT takes 20-40 minutes, totals 3,000 r spread out over a three-week period.



iron.

simple
t in a
pheric
d then
e been
mor or
prob-
tant to
use of
tumor
ded in
accord-

, the



therapy.

D NEWS

PERIODIC FEVER: A PUZZLE SOLVED

Investigators find that body's own metabolism can pile up hormone waste products that cause recurrent fever attacks

"Periodic fever" has long tested the credulity of the skeptical physician.

Common sense, at least, indicates that there must be some disease underlying spontaneous recurring attacks of high temperature—even if all diagnostic tests reveal none.

Now, a naturally occurring steroid waste product has been tagged as one cause of the disease, when it occurs without infection. Drs. Philip Bondy and George Cohn of Yale University's medical school have uncovered eight patients — all males, aged 10 to 48, white and Negro — who have regular high fevers at intervals of three to five weeks.

Their pattern is so precise that most of them can predict with nearly 100 per cent accuracy the day of their next attack.

During attacks, each patient's plasma and urine contain unusually large amounts of etiocholanolone, a 17-ketosteroid, natural testosterone derivative. Between attacks, all eight patients have normal etiocholanolone levels. And all are otherwise in generally good health.

Induction by Steroid

The Yale clinicians found their first two patients after the 1957 discovery by Dr. Attallah Kappas and others that the steroid could artificially precipitate a single fever attack.

Dr. Kappas, then at Sloan-Kettering Institute in New York, along with Dr. T. F. Gallagher, induced fever attacks in more than 50 normal and cancerous afebrile human subjects by intramuscular injection or very slow intravenous infusion of etiocholanolone. The hormone elevated temperatures six or more degrees F within 10 to 12 hours after start of administra-

tion, depending on the dosage used.

Now at the University of Chicago's medical school, Dr. Kappas heads a research team which discovered that etiocholanolone is not the only human steroid waste product that can induce single attacks of fever. Other hormone pyrogens include almost a dozen pregnane compounds and lithocolic acid. None of the steroids, Dr. Kappas notes, are contained in therapeutic preparations.

Some of the pregnane pyrogens are precursors and derivatives of hydrocortisone, which happens to be antipyretic. "An interesting paradox," says Dr. Kappas.

Thus, Dr. Kappas comments, it may be necessary to re-evaluate "our past views on hormone metabolism."

New Form of Activity

The Chicagoans regard etiocholanolone as "the prototype of the steroid pyrogens," and the fever effect as "a new form of biologic activity for a class of steroids generally considered inert."

Although the underlying mechanism is not clear, both the Yale and Chicago researchers think it may be found in faulty metabolism in the liver. The error may be an inability to conjugate, and thus detoxify, the steroid. This results in an increased plasma level of the pyrogen. Notes Dr. Bondy: Recurrent fever of this type can be suspected by the clinician through urine tests for abnormal levels of etiocholanolone.

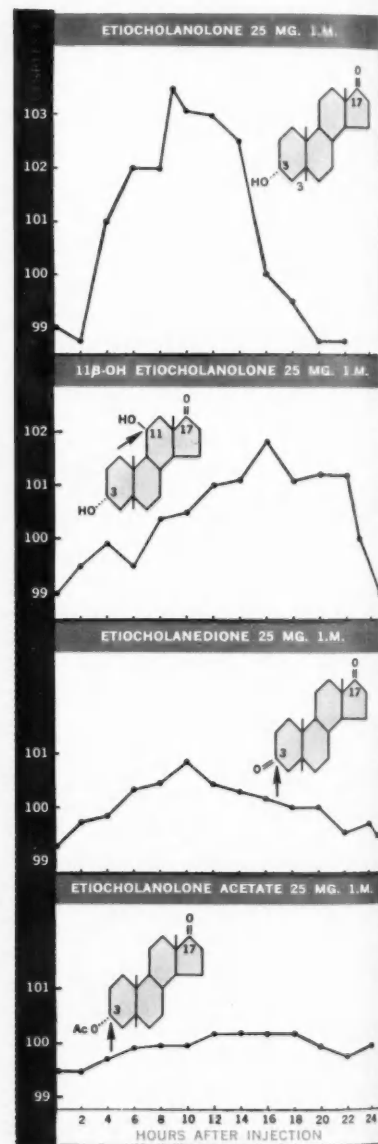
The characteristic temperature reactions to a series of four etiocholanolone steroids show that the response depends on the molecule's structure (see chart). The most potent is etiocholanolone. Slightly less thermogenic is 11-beta-hydroxy etiocholanolone. Least thermogenic is etiocholanedione. These three hormones occur spontaneously in the body. Only etiocholanolone acetate, the chemist's equivalent of a liver-detoxified steroid, fails to increase body temperature.

This series, which is representative of other "waste product" pyrogens, presages future clinical discoveries, Dr.

Kappas told MEDICAL WORLD NEWS. "Since we have described about a dozen of these steroids, and Dr. Bondy's work only involves one steroid, we feel quite sure that a number of other febrile diseases will be shown to be attributable to the inordinate amounts of pyrogenic steroids in the blood."

"I agree," says Dr. Bondy. ■

PYROGENIC ACTIVITY DEFINES A NEW CLASS OF STEROIDS



TEMPERATURE CURVES show gradations in human pyrogenic response to injection of four human steroids. Top three graphs reveal that so-called "inert" hormones sometimes can be physiologically potent.

NEWS.
bout a
nd Dr.
es one
a num-
will be
the in-
steroids

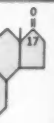
FINES
OIDS

M.



G. I.M.

M.



G. I.M.

0 22 24

lations
jection
graphs
rmones
potent.

D NEWS

'A VERY UNUSUAL PERSON'

With synthesis of chlorophyll, Robert Woodward boosts reputation as wizard of chemistry

At the precocious age of 26, he synthesized quinine. By 36, he had synthesized cortisone, cholesterol, strychnine, lysergic acid and reserpine.

Thus, it came as no great surprise to organic chemists last week when Dr. Robert Burns Woodward, now only 43, revealed he had accomplished in four years what has tormented scientists for four decades: the total synthesis of chlorophyll.

In seven formula-crammed pages of the *Journal of the American Chemical Society*, Dr. Woodward and his 17 associates at Harvard University trace how they took "simple substances," transformed them into four pyrroles, linked these in a ring, then turned the trick of putting together the rest of the molecule skeleton and its side groups, atom by atom. The result is the complex chlorophyll *a* molecule with 55 carbon, four nitrogen, five oxygen, one magnesium and 72 hydrogen atoms. So far, about six hundred-thousandths of an ounce of the green pigment has been produced at Harvard's Converse Memorial Laboratory. Although it cannot actually accomplish photosynthesis, it nonetheless represents the potential key to an eventual explanation of this crucial life-process.

Even before this remarkable feat, Woodward had been acclaimed as the young wonder of organic chemistry. Says Dr. Arthur Cope, head of the chemistry department at Woodward's alma mater, Massachusetts Institute of Technology: "He is one of the world's

great chemists. A very unusual man."

Says Woodward of his own work: "Great fun."

Considering the magnitude of his many achievements, however, Woodward is relatively unknown outside the community of organic chemists. Just named Donner Professor of Science at Harvard, he despises exercise as a "misuse of energy," has a penchant for blue (wears only blue ties, has a pale blue office, drives a blue convertible) and has one hobby—chemistry. This single interest began, he says, about the age of ten in Quincy, Mass., near Boston, where he was born. "There were a bunch of kids in the neighborhood who were interested in science. I just went along with them."

Suspended from MIT

At MIT, Woodward was an independent student, objecting to some of the requirements for graduation. "He flunked a required course in economics twice," a friend recalls. "It was a matter of integrity with him—he'd be damned if he would give the answers he felt the professors wanted."

"In addition, his dislike for exercise was already pronounced. He was always skipping gym, and as a result was suspended. It was during this period that he wrote his first scientific paper on the 'staling' of coffee." But eventually he returned to the Institute and reluctantly passed the economics exam.

"He educated himself," says another acquaintance. "He's always been an omnivorous reader. And he used to do things like passing an exam without attending classes. He did this in calculus when he first came to MIT."

Woodward raced through MIT on the double. At 19, he got his B.S.; at

20, he had his Ph.D. After MIT, he became an assistant at Harvard. He was a Junior Fellow of Harvard's Society of Fellows until 1940. In 1942, he began his work on quinine, supported by a grant from the Polaroid Corporation and spurred by the needs of the war.

In 1950 he synthesized the antibiotic mycooin; the following year, at 34, he was appointed a professor of chemistry and he synthesized cholesterol and cortisone; in 1954, strychnine, lysergic acid, lanosterol, and the complex anti-knock substance, ferrocene were synthesized.

Now honors were heaped upon him: the 1955 Backeland award of the American Chemical Society's North Jersey Section, the 1956 William H. Nichols Medal of the ACS's New York Section, the ACS Award for Creative Organic Chemistry in 1956, the George Ledlie Prize at Harvard in 1955, the Richards Medal in 1958 and the Davy Medal in 1959.

One of these citations, for the ACS Medal, described him as a man "whose creative brilliance in the laboratory has inspired chemists all over the world."

Such tributes are not lightly given. Dr. Cope says simply: "He works on problems like synthesis with extreme concentration and labor. He has grown a great deal in the past ten years. He has a very strong personality and has a very congenial outlook on things..."

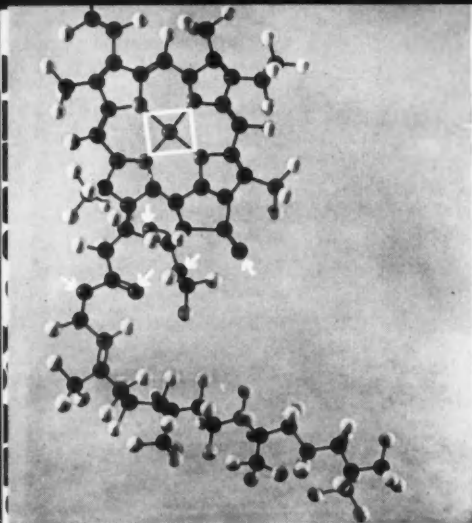
"Woodward enjoys parties," attests another friend. "He rations himself and doesn't go out in the middle of the week, but he is an indefatigable party man. He tells jokes with great relish and drama."

But the party-loving chemist spends

CONTINUED



CHAIN-SMOKER Woodward spends long hours tracing synthesis clues.



MAGNESIUM atom (white box), hub of chlorophyll-a, is surrounded by four nitrogen atoms. Molecule also has five oxygen (arrows), 55 carbon (black) and 72 hydrogen (white) atoms in its structure.

UNUSUAL PERSON CONTINUED
most of his hours in the laboratory, often working late into the night.

Woodward's dislike for walking or other forms of exercise is illustrated by the fact that while his office is only two blocks from the Harvard Faculty Club, he insists on driving there for lunch.

On his reading, a friend observes: "He is a very rapid and retentive reader. He reads more chemistry journals than anyone I know, not only in his field, but even in remote fields." Woodward himself quips, "I read everything, even the ads in the *Saturday Evening Post*."

As a lecturer, he is considered "... very dramatic. He speaks extremely well, draws formulas beautifully. He uses no notes or texts, but delivers his lectures faultlessly, as though giving them from a prepared manuscript. He is extremely highly regarded by his students."

For the past ten years, Woodward has lived in the Boston suburb of Belmont, only five miles (by car) from his office. His wife, Eudoxia, has no connection with science. The four children include Siiri, 20; Jean, 16; Crystal, 12 and Eric, 7.

Summing up his work, Woodward notes that his greatest thrill has been the synthesis of chlorophyll. He is convinced that the chemical synthesis is related to the biosynthesis. "With this, I've mapped out some 26 projects in this field, which should keep me occupied for at least the next ten years." ■

OPEN DEBATE ON CLOSED PANEL

A dispute between a medical society and MDs of the largest closed panel group in the U.S. becomes public and political

New York City's Health Insurance Plan, established in 1947, is the largest closed panel plan in the country. Its 1,000 physicians cover some 580,000 patients, almost two-thirds of whom are city employees and their dependents. Twenty-four thousand of the patients live on Staten Island, a city borough in New York harbor.

A battle royal has now upset the calm of this one-time clam-diggers' paradise. Doctor is pitted openly against doctor. And the dispute shows political overtones; it has already involved Mayor Robert F. Wagner and a state legislative committee. At issue is the troublesome problem of closed panel versus free choice of doctor.

HIP has 17 doctors on the island. They charge that member physicians have been barred from privileges in Staten Island's three voluntary hospitals. To this, the leaders of the 250-member Richmond County Medical Society reply: there has been no discrimination.

Dispute Becomes Public

The controversy, which has been festering privately since December 1957, became a public issue with the death of Dr. Joseph Garabedian, an obstetrician-member of the HIP-operated Staten Island Medical Group. The HIP physicians inserted an "open letter" in the local newspaper attacking the hospitals for having failed "in their social obligation to permit qualified doctors of this plan to treat their patients." They charged that the hospitals refused to accept an obstetrician to serve as Dr. Garabedian's assistant in 1957.

There were immediate repercussions. Hospital administrators and the society counter-attacked. The ad, they maintained, implied that they had hastened Dr. Garabedian's death (he was 41) by forcing an abnormal work-load

upon him. At this point, the State Joint Legislative Committee on Health Insurance Plans, in Albany, stepped in and ordered a public hearing.

On the eve of the hearing, from the Democratic convention in Los Angeles, Mayor Wagner announced by telegram that the three hospitals had agreed to grant privileges to two HIP obstetricians. But the issue was far from resolved, as the public hearing subsequently showed.

Charges and countercharges were hurled by 30 witnesses. Dr. Herbert King, medical director of the Staten Island HIP group, declared that four physicians had partly, or wholly, severed their association with HIP in the last two years because of lack of hospital privileges. Moreover, at least 20 others had refused affiliation with the plan "specifically because they were aware they would not have hospital privileges."

'Open Staff' Policy?

Dr. George McCormick, a past president of the county society, countered by accusing HIP of seeking to impose an "open staff" policy — which would automatically allow any licensed physician to receive courtesy privileges in any hospital. Such a policy, said Dr. McCormick, would produce "chaos."

Spokesmen for the county society repeatedly attacked the New York City policy of allegedly encouraging HIP by paying half of the premiums for city employees. Said Dr. Joseph H. Shanaphy, a staff member at two of the hospitals: "HIP is a monopoly, nurtured by economic duress and serving a captive clientele."

When the hearing ended, the issue still remained unresolved. State Senator George A. Metcalf, committee chairman, will try to bring both sides together. But *The New York Times* may have put its finger on the heart of the dispute when, editorially, it said the problem has arisen "primarily" because of the hospital representatives' "dislike of, and opposition to, the group practice, prepayment type of medical service — a 'repugnant ideology,' as one of them called it." ■

ATTENTION PLEASE!

EFFECTIVE IMMEDIATELY
LEDERLE OFFERS
VITAMINS & HEMATINICS
FORMULATED...

WITH THERAPEUTIC
LEVELS OF FOLIC ACID
FOR YOUR PRESCRIPTION

WITHOUT FOLIC ACID
FOR YOUR NON-RX
RECOMMENDATION

as indicated on following pages...

e Joint
th In-
ped in

from
n Los
ounced
spitals
to two
e was
earing

s were
erbert
Staten
at four
y, sev-
in the
hospit-
ast 20
ith the
y were
ospital

a past
count-
to im-
which
censed
vileges
aid Dr.
chaos."
society
York
raging
miums
eph H.
o of the
y, nur-
rving a

e issue
e Sen-
mittee
h sides
Times
heart of
it said
narily"
tatives'
o, the
ype of
t ideo-

D NEWS

AVAILABLE WITH THERAPEUTIC LEVELS OF FOLIC ACID *for your prescription*

The following Lederle products provide sufficient folic acid in recommended daily dosage to meet criteria for therapeutic use. You can be sure that your patient will receive specified concentration in the very next Rx you write.

FILIBON® F-A CAPSULES

Prenatal Supplement with Folic Acid Lederle

FOLBESYN® TABLETS

Vitamins Lederle

FOLVITE® ELIXIR, SOLUTION, TABLETS

Folic Acid Lederle

PERFOLIN® CAPSULES

Multivitamins Lederle

PERIHEMIN®

Hematinic Lederle

PRENATAL DRI-KAPS®

Dry Filled Capsules Lederle

PRONEMIA® CAPSULES

Hematinic Lederle

AVAILABLE WITHOUT FOLIC ACID

for your non-Rx recommendation

The following Lederle products have been formulated to eliminate folic acid in products available for purchase without prescription. You can be certain that your recommendation for any of these products can be immediately filled under these specified standards.

FALVIN[®] CAPSULES

Hematinic Lederle

FILIBON[®] CAPSULES

Prenatal Supplement Lederle

GEVRABON[®]

Liquid Vitamin-Mineral Supplement Lederle

GEVRAL[®] CAPSULES

Vitamin-Mineral Supplement Lederle

GEVRAL[®] T CAPSULES

High Potency Vitamins-Minerals Lederle

LEDERPLEX[®] CAPSULES & LIQUID

Vitamin B Complex Lederle

STRESSCAPS[®] CAPSULES

Stress Formula Vitamins Lederle

VI-MAGNA[®] CAPSULES

Multivitamins Lederle

Complete formulas on following page

LEDERLE NUTRITIONAL PRODUCTS

IMMEDIATELY AVAILABLE

WITH THERAPEUTIC LEVELS OF FOLIC ACID

CAUTION: Federal Law prohibits dispensing without a prescription.

FILIBON® F-A Prenatal Supplement with Folic Acid. Each capsule contains: Vitamin A 4,000 U.S.P. Units; Vitamin D 400 U.S.P. Units; Thiamine Mononitrate (B₁) 3 mg.; Pyridoxine (B₆) 1 mg.; Niacinamide 10 mg.; Riboflavin (B₂) 2 mg.; Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/6 U.S.P. Oral Unit; Ascorbic Acid (C) (as Calcium Ascorbate) 50 mg.; Vitamin K (Menadione) 0.5 mg.; Folic Acid 1 mg.; Ferrous Fumarate (Elemental iron, 30 mg.) 91.2 mg.; Fluorine (as CaF₂) 0.015 mg.; Copper (as CuO) 0.15 mg.; Iodine (as KI) 0.01 mg.; Potassium (as K₂SO₄) 0.835 mg.; Manganese (as MnO₂) 0.05 mg.; Magnesium (as MgO) 0.15 mg.; Molybdenum (as Na₂MoO₄·2H₂O) 0.025 mg.; Zinc (as ZnO) 0.085 mg.; Calcium Carbonate 575 mg.; Dosage: 1 to 3 capsules daily or as directed by the physician.

FOLBESYN® Vitamins. Each tablet contains: Thiamine Mononitrate (B₁) 10 mg.; Riboflavin (B₂) 5 mg.; Folic Acid 5 mg.; Niacinamide 50 mg.; Ascorbic Acid (C) 175 mg.; Vitamin B₁₂ 5 mcgm.; Recommended Intake: 1 or more daily or as prescribed by a physician.

FOLVITE®

Folic Acid

TABLETS, 5 mg.

SOLUTION, 15 mg./cc.

ELIXIR, 5 mg./5 cc.

Therapeutic dosage: Adults, 5-20 mg. daily.

PERFOLIN® Multivitamins. Each Capsule contains: Vitamin A 25,000 Units; Vitamin D 1,000 Units; Thiamine Mononitrate (B₁) 10 mg.; Riboflavin (B₂) 5 mg.; Niacinamide 150 mg.; Ascorbic Acid 150 mg.; Folic Acid 5 mg.; Vitamin B₁₂ 5 mcgm.; Dosage: 1 capsule daily.

PERIHEMIN® Hematinic Capsules. Each capsule contains: Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 2/3 U.S.P. Oral Unit; Ferrous Fumarate (Elemental iron, 55 mg.) 168 mg.; Folic Acid 0.67 mg.; Ascorbic Acid (C) 50 mg. Dosage: 3 a day.

PRENATAL DRI-KAPS® Dry Filled Capsules Lederle. Each capsule contains: Vitamin A 2,000 U.S.P. Units; Vitamin D 400 U.S.P. Units; Thiamine Mononitrate (B₁) 2 mg.; Riboflavin (B₂) 2 mg.; Niacinamide 7 mg.; Vitamin B₁₂ 1 mcgm.; Vitamin K (Menadione) 0.5 mg.; Ascorbic Acid (C) 35 mg.; Folic Acid 1 mg.; Calcium (in CaHPO₄) 250 mg.; Phosphorus (in CaHPO₄) 190 mg.; Ferrous Sulfate Exsiccated (Elemental iron, 6 mg.) 20 mg.; Manganese (in MnSO₄) 0.12 mg.; Dosage: 1-3 Dri-Kaps daily.

PRONEMIA® Hematinic. Each capsule contains: Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate Lederle 2 U.S.P. Units (Oral); Ferrous Fumarate (Elemental iron 115 mg.) 350 mg.; Ascorbic Acid (C) 150 mg.; Folic Acid 2 mg. Average Dosage: One capsule daily.

WITHOUT FOLIC ACID

FALVIN® Hematinic. Each capsule contains: Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate Lederle 1 U.S.P. Unit (Oral); Ferrous Fumarate (Elemental iron 90 mg.) 274.0 mg.; Ascorbic Acid (C) 75.0 mg.; Average Dosage: One capsule twice daily.

FILIBON® Prenatal Supplement. Each capsule contains: Vitamin A 4,000 U.S.P. Units; Vitamin D 400 U.S.P. Units; Thiamine Mononitrate (B₁) 3 mg.; Pyridoxine (B₆) 1 mg.; Niacinamide 10 mg.; Riboflavin (B₂) 2 mg.; Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/6 U.S.P. Oral Unit; Ascorbic Acid (C) (as Calcium Ascorbate) 50 mg.; Vitamin K (Menadione) 0.5 mg.; Ferrous Fumarate (Elemental iron, 30 mg.) 91.2 mg.; Fluorine (as CaF₂) 0.015 mg.; Copper (as CuO) 0.15 mg.; Iodine (as KI) 0.01 mg.; Potassium (as K₂SO₄) 0.835 mg.; Manganese (as MnO₂) 0.05 mg.; Magnesium (as MgO) 0.15 mg.; Molybdenum (as Na₂MoO₄·2H₂O) 0.025 mg.; Zinc (as ZnO) 0.085 mg.; Calcium Carbonate 575 mg.; Dosage: 1 to 3 capsules daily.

GEVRABON® Liquid Vitamin-Mineral Supplement. Each fluid ounce (30 cc.) contains: Thiamine HCl (B₁) 5 mg.; Riboflavin (B₂) 2.5 mg.; Vitamin B₁₂ 1 mcgm.; Niacinamide 50 mg.; Pyridoxine HCl (B₆) 1 mg.; Pantothenic Acid (as panthenol) 10 mg.; Choline (as tricholine citrate) 100 mg.; Inositol 100 mg.; Calcium (as Ca glycerophosphate) 48 mg.; Phosphorus (as Ca glycerophosphate) 39 mg.; Iodine (as KI) 0.1 mg.; Potassium 10 mg.; Magnesium (as MgCl₂·6H₂O) 2 mg.; Zinc (as ZnCl₂) 2 mg.; Manganese (as MnCl₂·4H₂O) 2 mg.; Iron (as ferrous gluconate) 20 mg.; Alcohol 18%; Dosage: 2 tablespoonfuls daily.

GEVRAL® Vitamin-Mineral Supplement. Each capsule contains: Vitamin A 5,000 U.S.P. Units; Vitamin D 500 U.S.P. Units; Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/15 U.S.P. Oral Unit; Thiamine Mononitrate (B₁) 5 mg.; Riboflavin (B₂) 5 mg.; Niacinamide 15 mg.; Pyridoxine HCl (B₆) 0.5 mg.; Ca Pantothenate 5 mg.; Choline Bitartrate 50 mg.; Inositol 50 mg.; Ascorbic Acid (C) 50 mg.; Vitamin E (as tocopheryl acetates) 10 I. U.; L-Lysine Monohydrochloride 25 mg.; Rutin 25 mg.; Ferrous Fumarate (Elemental Iron, 10 mg.) 30.4 mg.; Iodine (as KI) 0.1 mg.; Calcium (as CaHPO₄) 145 mg.; Phosphorus (as CaHPO₄) 110 mg.; Boron (as Na₂B₄O₇·10H₂O) 0.1 mg.; Copper (as CuO) 1 mg.; Fluorine (as CaF₂) 0.1 mg.; Manganese (as MnO₂) 1 mg.; Magnesium (as MgO) 1 mg.; Potassium (as K₂SO₄) 5 mg.; Zinc (as ZnO) 0.5 mg.; Dosage: 1 capsule daily.

GEVRAL®-T High Potency Vitamins and Minerals. Each capsule contains: Vitamin A 25,000 U.S.P. Units; Vitamin D 1,000 U.S.P. Units; Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/3 U.S.P. Oral Unit; Thiamine Mononitrate (B₁) 10 mg.; Riboflavin (B₂) 10 mg.; Pyridoxine HCl (B₆) 2 mg.; Vitamin E (as tocopheryl acetates) 5 I. U.; Vitamin K (Menadione) 2 mg.; Ascorbic Acid (C) 150 mg.; Calcium Pantothenate 5 mg.; Niacinamide 100 mg.; Calcium (as CaHPO₄) 107 mg.; Phosphorus (as CaHPO₄) 82 mg.; Ferrous Fumarate (Elemental Iron 15 mg.) 45.6 mg.; Magnesium (as MgO) 6 mg.; Potassium (as K₂SO₄) 5 mg.; Iodine (as KI) 0.15 mg.; Boron (as Na₂B₄O₇·10H₂O) 0.1 mg.; Copper (as CuO) 1 mg.; Manganese (as MnO₂) 1 mg.; Fluorine (as CaF₂) 0.1 mg.; Zinc (as ZnO) 1.5 mg.; Molybdenum (as Na₂MoO₄·2H₂O) 0.2 mg.; Choline Bitartrate 25 mg.; Inositol 25 mg.; L-Lysine Monohydrochloride 25 mg.; Rutin 25 mg.; Dosage: 1 capsule daily.

LEDERFLEX® Vitamin B Complex Liquid. Each teaspoonful (4 cc.) contains: Thiamine HCl (B₁) 2.0 mg.; Riboflavin (B₂) 2.0 mg.; Niacinamide 10.0 mg.; Pyridoxine HCl (B₆) 0.2 mg.; Pantothenic Acid (as Panthenol) 2.0 mg.; Choline 20.0 mg.; Inositol 10.0 mg.; Soluble Liver Fraction 470.0 mg.; Vitamin B₁₂ 5.0 mcgm.; Recommended Intake: Infants: As recommended by a physician. Adults: 2 teaspoonfuls (8 cc.) daily.

LEDERFLEX® Vitamin B Complex Capsules. Each capsule contains: Thiamine Mononitrate (B₁) 2.0 mg.; Riboflavin (B₂) 2.0 mg.; Niacinamide 10.0 mg.; Pyridoxine HCl (B₆) 0.2 mg.; Inositol 10.0 mg.; Calcium Pantothenate 3.0 mg.; Choline 20.0 mg.; Insoluble Liver Fraction 414 mg.; Vitamin B₁₂ 1.0 mcgm.; Recommended Intake: Adults: 2 tablets daily.

STRESSCAPS® Stress Formula Vitamins. Each capsule contains: Thiamine Mononitrate (B₁) 10 mg.; Riboflavin (B₂) 10 mg.; Niacinamide 100 mg.; Ascorbic Acid (C) 300 mg.; Pyridoxine HCl (B₆) 2 mg.; Vitamin B₁₂ 4 mcgm.; Calcium Pantothenate 20 mg.; Vitamin K (Menadione) 2 mg.; Dosage: 1 capsule daily.

VI-MAGNA® Multivitamins. Each capsule contains: Vitamin A 5,000 U.S.P. Units; Vitamin D (Vioosterol) 500 U.S.P. Units; Thiamine Mononitrate (B₁) 3 mg.; Riboflavin (B₂) 3 mg.; Niacinamide 20 mg.; Calcium Pantothenate 1 mg.; Pyridoxine HCl (B₆) 0.2 mg.; Ascorbic Acid (C) 75 mg.; Vitamin B₁₂ 1 mcgm.; Dosage: 1 capsule daily.

THE NEED FOR PANTOTHENIC ACID, BIOTIN, INOSITOL, CHOLINE, ZINC, BORON, CALCIUM PANTOTHENATE IN HUMAN NUTRITION HAS NOT BEEN ESTABLISHED.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.



5,000
mg.;
mg.;

B₁₂
Unit;
mg.;

com-
Thia-
mg.;
Acid
porus
mg.)

AU-
Fer-
(C)

ains:
amin
Unit;
oxine
in K
enate
porus
mg.;
odine
CuO)
Zinc
oline
mg.;

cc.)
cina-
Pan-
Liver
In-
cc.)

Thia-
10.0
unto-
mg.;
aily.

mine
mg.;
B₁₂
mg.;

S.P.
trate
nto-
mg.;

ile



LEGISLATIVE NEWS

The International Health Research bill finally made the grade—but in an extremely diluted form. In the pre-convention adjournment rush, the Senate bowed to the inevitable and accepted the House amendments. Under the original Senate bill, a special international research institute would have been set up at the National Institutes of Health, with an initial appropriation of \$50 million.

Under the final House-revised version, the institute idea is eliminated, and authority to use counterpart (foreign currency) funds is substituted for the \$50 million.

A color additives bill passed Congress, including the controversial Delaney amendment against carcinogenic substances. This means that any additives deemed suspect as carcinogens on the basis of animal experiments are barred. The only modification of the original Delaney proposal is that in case of a dispute over a Food and Drug Administration ruling, a committee of experts would be appointed by the HEW secretary to judge the evidence.

Also run through the legislative mill: The so-called hazardous substances bill, backed by the AMA, which requires special warning labels on potentially dangerous household items. But left hanging for the special politically-charged, post-conventions session are health care for the aged, the Keogh bill (giving physicians and other self-employed a tax break), and social security for doctors.

A bill to police the use of animals in medical research under governmental auspices is being considered by Congress. The National Society for Medical Research, which is leading a fight against the move, terms the bill "an attempt to strangle medical research with red tape." Sponsored by Sen. John Sherman Cooper (D-Ky.) and others, it states that all scientists engaged in animal research under government grant or contract must be "licensed." Moreover, licensees must file "project plans" with HEW specifying details of the proposed experiment. These plans must show proof, among other things, that animals are anesthetized before painful operations (unless anesthesia would interfere with the purpose of the experiment), and that they are humanely destroyed immediately after a painful procedure. The proposal also called for record keeping and reports of various kinds.

DOCTOR'S BUSINESS

Incomes in group practice What's the range of earnings of doctors in group practice these days? If you're a full partner in a multi-specialty group, says the American Association of Medical Clinics, you can expect a top income of \$30,000 to \$36,000, regardless of whether you're a specialist or general practitioner. If you join a group directly from a residency, you'll probably start at a salary of \$9,000 to \$12,000.

Group health policies dominate field Of the three main types of policies sold to employed groups — health insurance, life insurance and annuities — health coverage is by far the most popular. Premiums paid for group health plans last year totaled more than \$2,500,000,000, the Health Insurance Association of America reports. This is half again the amount paid for group life policies and double the total for annuities. The aggregate premium for group health rose 11 per cent over the previous year's total.

Rx for emergency rooms If you can't beg, borrow or steal a young doctor to staff your hospital's emergency room, maybe you can buy one. Here's how it's done in the 90-bed West Texas Hospital in Lubbock:

The hospital pays a young staff doctor \$25 for each 24 hours of emergency-room coverage (\$50 for Saturdays and Sundays). To foot this bill, the hospital makes a minimum charge of \$2 per emergency treatment—and the doctor is allowed to keep any additional amount he collects from the patient.

Diners Club with a difference Credit cards have now infiltrated the practice of medicine. A Battle Creek, Mich., businessman has organized the American Health Credit Plan, Inc., which provides a single-billing system for such health services as doctors' fees, dental procedures, hospitals, drugs, glasses, hearing aids, prostheses, etc. The plan also offers a "sick now, pay later" arrangement.

More MDs than ever before Physician population rose just slightly more last year than the previous year, an AMA survey shows. The gain of 4,769 doctors was 660 more than the 1958 increase. The gain results from the licensing of 8,269 new MDs, minus the loss of 3,500 who died. Biggest increases in doctor population were in Alabama, Connecticut, Illinois, New Jersey, and Puerto Rico.

SS

these
o, says
spect a
hether
group
lary of

ups —
cover-
health
Health
ain the
tal for
se 11

ff your
's how
C
hours
days).
\$2 per
ep any

cine. A
merican
system
dures,
c. The

an the
ctors
s from
O who
bama,



Naturetin

Squibb Benzydrolumethiazide

Naturetin K

Squibb Benzydrolumethiazide with Potassium Chloride

"...a safe and extraordinarily effective diuretic..."¹

Naturetin—reliable therapy in edema and hypertension—maintains a favorable urinary sodium-potassium excretion ratio...retains a balanced electrolytic pattern:

"...the increase in urinary output occurs promptly..."¹

"...the least likely to invoke a negative potassium balance..."²

"...a dose of 5 mg. of Naturetin produces a maximal sodium loss..."²

"...an effective diuretic agent as manifested by the loss in weight..."³

"...no apparent influence of clinical importance on the serum electrolytes or white blood count..."³

"...no untoward reactions were attributed to the drug..."⁴

Although Naturetin causes the least serum potassium depletion as compared with other diuretics, supplementary potassium chloride in Naturetin K provides added protection when treating hypokalemia-prone patients; in conditions where likelihood of electrolyte imbalance is increased or during extended periods of therapy.

References: 1. David, N. A.; Porter, G. A., and Gray, R. H.: *Monographs on Therapy* 5:60 (Feb.) 1960. 2. Stenberg, E. S., Jr.; Benedetti, A., and Forsham, P. H.: *Op. cit.* 5:46 (Feb.) 1960. 3. Fuchs, M.; Moyer, J. H., and Newman, B. E.: *Op. cit.* 5:55 (Feb.) 1960. 4. Marriott, H. J. L., and Schamroth, L.: *Op. cit.* 5:14 (Feb.) 1960. 5. Ira, G. H., Jr.; Shaw, D. M., and Bogdanoff, M. D.: *North Carolina M. J.* 21:19 (Jan.) 1960. 6. Cohen, B. M.: *M. Times*, to be published. 7. Breneman, G. M., and Keyes, J. W.: *Henry Ford Hosp. M. Bull.* 7:281 (Dec.) 1959. 8. Forsham, P. H.: *Squibb Clin. Res. Notes* 2:5 (Dec.) 1959. 9. Larson, E.: *Op. cit.* 2:10 (Dec.) 1959. 10. Kirkendall, W. M.: *Op. cit.* 2:11 (Dec.) 1959. 11. Yu, P. N.: *Op. cit.* 2:12 (Dec.) 1959. 12. Weiss, S.; Weiss, J., and Weiss, B.: *Op. cit.* 2:13 (Dec.) 1959. 13. Moser, M.: *Op. cit.* 2:13 (Dec.) 1959. 14. Kahn, A., and Greenblatt, I. J.: *Op. cit.* 2:15 (Dec.) 1959. 15. Grollman, A.: *Monographs on Therapy* 5:1 (Feb.) 1960.

Numerous clinical studies confirm the effectiveness¹⁻¹⁵ of Naturetin as a diuretic and antihypertensive—usually in dosages of 5 mg. per day.

■ the most potent diuretic, mg. for mg.—more than 100 times as potent as chlorothiazide ■ prolonged action—in excess of 18 hours ■ maintains its efficacy as a diuretic and antihypertensive even after prolonged or increased dosage use ■ convenient once-a-day dosage—more economical for patients ■ low toxicity—few side effects—low sodium diets not necessary ■ not contraindicated except in complete renal shutdown ■ in hypertension—significant lowering of the blood pressure. Naturetin may be used alone or with other antihypertensive drugs in lowered doses.

Supplied: Naturetin Tablets, 5 mg. (scored) and 2.5 mg. Naturetin K (5 \bar{e} 500) Tablets (capsule-shaped) containing 5 mg. benzydrolumethiazide and 500 mg. potassium chloride. Naturetin K (2.5 \bar{e} 500) Tablets (capsule-shaped) containing 2.5 mg. benzydrolumethiazide and 500 mg. potassium chloride.

SQUIBB



Squibb Quality—the Priceless Ingredient

*NATURETIN® IS A SQUIBB TRADEMARK.



Cartoon idea by pharmacist Emil Magdalener

Many of you may have seen a recent cartoon depicting a midnight scene in front of a pharmacy. A woman is pounding on the door and the pharmacist is leaning out the window of his apartment over the store. "Open up," shouts the woman. "My husband is sick and I need a stamp so I can send this prescription to the mail order house."

The drug that always fails is the drug that isn't there

Far-fetched? Perhaps, but there are those who would have us believe that our present system of drug distribution is inefficient and costly, and should be replaced by presumably more efficient and cheaper centralized or bureaucratic methods. Disregarding the probable political philosophy behind these suggestions, consider what a marvelously intricate and efficient system of drug distribution we have in this country. • From the laboratories of the manufacturers comes a steady stream of new and better drugs for your patients. Warehoused and stocked by drug wholesalers, these products are available in over 53,000 pharmacies scattered across the length and breadth of our land. And woe to the pharmacist who hasn't been provided with yesterday's laboratory discovery for your use in treating a patient today. • The economists speak of "utility of time" and "utility of place." We simply say that you can confidently prescribe *what* you choose, *when* it is needed, *wherever* your patient may be.

This message is brought to you by the producers of prescription drugs as a service to the medical profession. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

Names in the News

POSTS

Dr. Warren H. Cole, professor and head of the department of surgery, University of Illinois College of Medicine, and currently president of the American Cancer and American Surgical Societies, elected president of newly-organized Association for Colon Surgery.

Dr. Edward C. Curnen, Jr., professor and chairman of department of pediatrics of the University of North Carolina School of Medicine, **Dr. Donald G. McKay**, (bottom) assistant professor of pathology at Harvard Medical School to chairman of the departments of pediatrics and pathology respectively at Columbia University's College of Physicians and Surgeons, and Presbyterian Hospital.



Dr. Frances M. Love, from instructor of pediatrics at Washington University School of Medicine and Children's Medical Center and Southwestern

Medical College, Dallas, to director of medical services, Lederle Laboratories.

Dr. Geoffrey Edsall, director of the division of communicable diseases, Walter Reed Army Institute of Research, Washington, D. C., named superintendent of the Institute of Laboratories for Massachusetts and professor of applied microbiology at the Harvard School of Public Health.

Dr. John Kapp Clark, director of research Smith Kline & French Laboratories and associate professor of medicine at the University of Pennsylvania, appointed director of research and development at SKF.

AWARDS

For hiking from San Francisco to New York in 85 days, British vegetarian-physician **Dr. Barbara Moore** feted at victory dinner in the Bridal Suite of the Hotel Astor. Main course: carrots, turnips, broccoli and an indulgent glass of champagne.

Dr. Manuel F. Morales, professor and chairman of the biochemistry department, Dartmouth Medical School, and **Dr. Oscar D. Ratnoff**, associate pro-

fessor of medicine at Western Reserve University School of Medicine, awarded life-time posts as American Heart Association career investigators.



Named Detroit's "Father of the Year," bachelor-obstetrician **Dr. Owen C. Foster**, who has delivered estimated 8,000 babies in his 40 years of practice.

The American Therapeutic Society's Oscar B. Hunter Award to **Dr. John H. Moyer**, professor and chairman of the department of medicine, Hahnemann Medical College for his "years'-long study and findings on blood pressure and kidneys."

OBITUARIES

Dr. Leo R. Tighe, 69, head of VA Hospital, Augusta, Ga., and for 40 years a psychiatrist and physician in veterans hospitals; of cancer; June 30, in Big Springs, Tex.

Dr. Alvin Slipyan, 53, director of medical research of Abilities, Inc., New York concern employing disabled workers; author of extensive literature on the influence of occupation on heart disease and other disabilities; of a heart attack; July 5, in Elmhurst (L. I.), N. Y.

Dr. Ralph T. B. Todd, 68, of Tarrytown, N. Y., like his father, Dr. John Todd, personal physician to the Rockefeller family, including New York's governor; of uremia; July 9, in Tucson, Ariz.

Dr. Irving Busch, 61, director of American-supported hospitals in Spain during the Spanish Civil War; of a

heart attack; July 7, in New York City.

Dr. Walter C. Hammond, assistant professor emeritus of obstetrics and gynecology at the University of Illinois medical school; June 11, in Chicago.

Dr. Eugene Howard Dobie, 83, one of ten graduates to be awarded a 50-year plaque by the Baltimore Medical College in 1950; June 29, in Presque Isle, Me.

Dr. Sterne Morse, 73, one-time associate with the Psychiatric Institute in New York and later with the Cleveland Clinic; July 2, in Sandwich, Mass.

Dr. C. Stanley Knapp, 66, former chief of staff of Greenwich (Conn.) Hospital and volunteer in early 1920's with the Grenfell Mission that provided medical care to northern Labrador natives; of a heart attack; July 6, in Greenwich.

ADVERTISER INDEX

PAGE

CIBA PHARMACEUTICAL PRODUCTS, INC.	
Serpasil-Apresoline	cover 3
LEDERLE LABORATORIES	
Institutional Vitamins	23-26
MCNEIL LABORATORIES, INC.	
Butibel	1
MERCK SHARP & DOHME	
Diuril	4-5
PARKE, DAVIS & CO.	
Chloromycetin	2
ROCHE LABORATORIES	
Librium	cover 4
Triburon	16
G. D. SEARLE & CO.	
Aldactone	15
E. R. SQUIBB & SONS	
Mystecilin-V	cover 2
Naturetin	29

ACKNOWLEDGMENTS: Cover, Michel Duplaix; 7 Louis Fruchter; 10, 12 Jim Coyne; 13 UPI; 14 Univ. of Minn.; 18 Elizabeth Wilcox, Michel Duplaix (2); 19 Michel Duplaix; 20 Louis Fruchter; 21, 22 Harvard Univ.; 31 Columbia Univ. (2), UPI; 32 Joseph Merante

LETTER FROM MOSCOW CONT



Morris Fishbein, M.D.

Some 52 medical journals are published in Moscow and between 200 and 300 in all of Russia, depending on what is counted as a journal. This now includes an abstract journal in Russian, like *Excerpta Medica*, with about 60,000 abstracts a year. These activities are directed by professor S. M. Bagdasarian, an Armenian, who also teaches medical history and who wrote the article on the history of Russian medicine in the *Russian Medical Encyclopedia*. I visited the headquarters of the encyclopedia, which is being carefully compiled by many authors with references to recent medical articles from all over the world. Everyone complained of lack of typewriters.

I later visited the Central Medical Scientific Library, of which professor I. M. Vereskov is in charge. This library and the Academy of Medical Sciences have priorities in securing medical books and periodicals. It has over a million books and claims to be second only in size to the National Medical Library at Bethesda, Md. An excellent card catalogue is available by subject and author. (Incidentally, they had twelve of my books. One was on display in a case at the entrance of the building.) Reading rooms, reference rooms and lending services are being used to capacity. I asked to see the old books and incunabula. I was taken to a room that was especially opened for me, in which there were thousands of books, including sets of ancient transactions of scientific societies. But they were poorly arranged and inadequately cared for.

The library itself, located in an old ramshackle building, is under the threat of a continuous fire hazard. Near the entrance, two posters from the Ministry of Health warn against smoking and lung cancer. Officials admitted that nobody paid any attention to them. A new library is planned for 1963.

I also paid a most interesting visit to professor M. M. Tarasov, director of the Sklifasovsky Institute, which is also a medical school. I was permitted to sit in on a daily conference, presided over by a professor Petroff, at which residents and assistants presented several cases of burns, fractures, tuberculosis, tumors and kidney disorders, including that of a 90-year-old woman with a fracture of the thigh. Professor Petroff suggested control in bed rather than surgery. (I noted that anesthesia is a highly-regarded specialty and that the operating rooms, while old, were well cared for.)

Cadaver Blood for Transfusion

A special section of the school is the Institute for Experimental Surgery. Here were the specimens and records of the two operations for transplanting a second head to a dog, as well as a second heart; diagrams of how an arm could be transplanted; and a proposal for a technique whereby a preserved perfused heart could substitute for a heart-lung machine. There are tissue banks, particularly for skin and blood vessels. I also witnessed the entire technique for withdrawing blood from cadavers — they have done 250,000 operations with cadaver blood, and they claim, at most, six complications. The blood is studied completely by competent people and under ideal conditions, and it is perfectly stored in refrigerators by types. They also prepare erythrocytes and platelets.

For a lighter diversion, we visited the ballet and the opera. The Bolshoi is the best in the world, and Russian opera is sung gloriously. But Russians singing Italian opera in Russian I found too horrible to contemplate.

Morris Fishbein

NT

g visit
rector
which is
mitted
resided
which
ed sev-
bercu-
ers, in-
woman
fessor
rather
esthesia
nd that
l, were

hool is
urgery.
records
planting
ell as a
an arm
proposal
reserved
e for a
e tissue
d blood
re tech-
d from
50,000
od, and
cations.
etely by
eal con-
ed in re-
prepare

e visited
Bolshoi
Russian
Russians
ussian l
plate.

hein

WORLD NEWS